

Canadian Journal of **PUBLIC HEALTH**

The National Journal of Preventive Medicine

~~NOT CIRCULATE~~

Volume 45

JULY 1954

Number 7

INFECTIOUS HEPATITIS IN A RURAL COMMUNITY IN ONTARIO

R. M. King, Anne-Marie Quigley, J. C. Sinclair and C. E. van Rooyen

ACID-FAST BACILLI RECOVERED FROM TUBERCULOUS MONKEYS

H. C. Plummer and M. H. Brown

THE MANCHESTER UNIVERSITY TEACHING HEALTH CENTRE

Fraser Brockington

POLIOMYELITIS IN NEWFOUNDLAND, 1953

A. O. D. McDermott

UNIVERSITY
OF MICHIGAN

RODENT PLAGUE SURVEYS

Eric W. Grant and G. L. Smith

AUG 18 1954

MEDICAL
LIBRARY

PROGRAM, FIFTH ANNUAL MEETING ONTARIO PUBLIC HEALTH ASSOCIATION

Toronto, September 23 and 24



Published Monthly by the

CANADIAN PUBLIC HEALTH ASSOCIATION

150 COLLEGE STREET, TORONTO 5

Roccal Reg. U. S. Pat. Off. and Canada **SANITIZING AGENT**

Measures up in every way as the quaternary of choice

The sanitizing properties of quaternary ammonium compounds are so well known to public health officials that little could be said about them that you do not know. Almost everybody in public health work has added the "quats" to the armamentarium he uses in his war on disease.

The question then is, "Which 'quat'?" Are they all alike? Which one can I depend on to do the job expected of it *every time*?

In Roccal, the original quaternary ammonium germicide, you are offered a product that is always uniform in quality because it is made under the most rigid controls. Every batch must pass the comprehensive laboratory tests of one of the world's leading pharmaceutical manufacturers. You can depend on Roccal to do a better sanitizing job *every time*!

When you specify a "Quat"
be sure it's *Genuine Roccal*

*In recommended
dilutions Roccal is:*

- ☒ **POTENT**
- ☒ **NON-POISONOUS**
- ☒ **TASTELESS**
- ☒ **ODORLESS**
- ☒ **STAINLESS**
- ☒ **NON-IRRITATING**
- ☒ **NON-CORROSIVE**
- ☒ **STABLE**



**Insist on
Genuine
Roccal** Reg. U. S. Pat. Off. and Canada **SANITIZING AGENT**

Winthrop-Stearns of CANADA, Ltd.

443 SANDWICH STREET WEST—WINDSOR, ONT.

MSE

'serum'

centrifuge

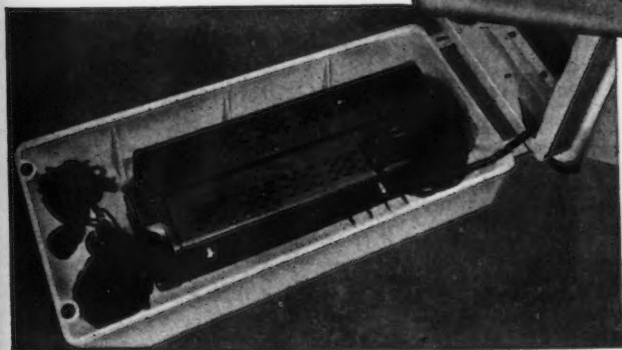
a 3.6 litre machine

takes 6 BLOOD bottles

This special-purpose centrifuge will swing six 600 ml.(cc.) blood bottles in a wind-shielded head at a maximum speed of 2,800 r.p.m. giving an RCF value of 2,500 x gravity. The powerful motor, solid construction and special bearings ensure that the "Serum" will stand up to prolonged heavy duty centrifuging, giving years of trouble-free service. Step-less speed control, automatic timer, integral electric revolution counter, clean functional lines and easily cleaned cream stove-enamel finish are some of the features that make this machine the finest available for the preparation of blood plasma, vaccines and viruses. Ask for Publication No. 134.



The entire front panel of the "Serum" can be hinged forward for instant access to the entire electrical installation.



FOR YOUR FILE: A brief review of all MSE Centrifuges, Homogenisers and Microtomes is given in Publication 888. Write for it today.

CANADIAN MSE LIMITED, 171 Kipling Avenue South, Toronto 18, Ontario
or **CAVE & CO. LTD.,** 567 Hornby St., Vancouver and 199 College St., Toronto

Canadian Journal of PUBLIC HEALTH

VOLUME 45

JULY, 1954

NUMBER 7

CONTENTS

ARTICLES:

- An Outbreak of Infectious Hepatitis Affecting a Rural Community in Ontario..... 279
R. M. King, M.D., D.P.H.; Anne-Marie Quigley, Reg.N.; J. C. Sinclair, M.D., F.R.C.P.(C.), and C. E. van Rooyen, M.D.
- Poliomyelitis in the Province of Newfoundland, 1953..... 284
A. O. D. McDermott, M.D.
- Letter from Great Britain: The Manchester University Teaching Health Centre..... 289
Fraser Brockington, M.R.C.S. (Eng.); L.R.C.P.(Lond.); D.P.H.; B. Chir., M.D. (Camb.), M.A.(Camb.); Barrister-at-law
- Local Health Department Participation in a Rodent Plague Survey..... 293
Eric W. Grant, C.S.I.(C.), and G. L. Smith, C.S.I.(C.)
- A Study of Acid-Fast Bacilli Recovered from Tuberculous Monkeys..... 296
H. C. Plummer and M. H. Brown

EDITORIAL SECTION:

- The Health Officer and the Canadian Medical Care Conference..... 301
- An Interesting Experiment..... 302

THE CANADIAN PUBLIC HEALTH ASSOCIATION, 1953-1954 (Part 2):

- Report of the Editorial Board. *R. D. Defries, M.D., D.P.H.*..... 303
- Report of the Committee on Professional Education. *R. D. Defries, M.D., D.P.H.*..... 304
- Report of the Committee on the Certification of Sanitary Inspectors. *A. E. Berry, M.A.Sc., C.E., Ph.D.*..... 306
- Report of the Committee on Recruitment of Public Health Personnel. *William Mosley, M.D., D.P.H.*..... 308
- Report of the Committee on Social Security. *G. H. Hatcher, M.D., D.P.H.*..... 309
- Report of the Laboratory Section. *F. O. Wishart, M.A., M.D., D.P.H.*..... 311
- Report of the Vital and Health Statistics Section. *H. G. Page, M.A., M.P.H.*..... 313
- Report of the Committee on Nominations. *C. W. MacMillan, M.D., D.P.H.*..... 315
- Report of the Committee on Resolutions. *L. A. Pequegnat, M.D., D.P.H.*..... 316

ONTARIO PUBLIC HEALTH ASSOCIATION:

Program, Fifth Annual Meeting, Royal York Hotel, Toronto, September 23 and 24, 1954. 317

The Canadian Journal of Public Health is published monthly by the Canadian Public Health Association. Editorial and business offices, 150 College Street, Toronto 5, Ontario. Subscription \$3.00 a year, payable in advance. Single copies 50 cents. Authorized as second-class mail, Post Office Department, Ottawa. Contents may be reproduced only with the permission of the Editorial Board.

Canadian Journal of PUBLIC HEALTH

VOLUME 45

TORONTO, JULY 1954

NUMBER 7

An Outbreak of Infectious Hepatitis Affecting a Rural Community in Ontario

R. M. KING, M.D., D.P.H., ANNE-MARIE QUIGLEY, Reg.N.

York County Health Unit, Newmarket, Ontario

J. C. SINCLAIR, M.D., F.R.C.P.(C.)

Department of Medicine, University of Toronto
and

C. E. VAN ROOYEN, M.D.

Connaught Medical Research Laboratories, University of Toronto

ALTHOUGH clinicians have observed infectious hepatitis throughout Canada for many years, medical literature contains few accounts of such outbreaks. Likewise, detailed analyses of the circumstances under which they occurred are few in number.

Evidence from abroad suggests that the epidemiological pattern of the disease may be closely linked with personal habits and living conditions. Predisposing conditions are said to be communal living and communal feeding in time of war and institutional living in time of peace. Perhaps the oldest and best account of this disease in Canadian medical literature has been provided by Fraser (1) of Mount Allison University, Sackville, N.B., who reported 183 cases during the period December 1930 to January 1931. Fraser stated that some 620 students housed in five residential buildings suffered acute gastro-enteritis, 18-35 days (average 26 days) before onset of jaundice.

In these five residences, drinking water consumed was derived from an open spring in close proximity to a drainage ditch heavily polluted with sewage. In the sixth residence only two cases of gastro-enteritis occurred, one of which developed jaundice. The latter building was served by town water supply but the two patients affected admitted to having used water at one of the five residences where the water supply was contaminated. At the seventh residence only town piped water was used and here no cases of illness occurred. Apparently, the disease was confined to the six college residences; the town of Sackville (2,500) escaped infection. Thus, the evidence provided by Fraser (1) affords striking proof of the association of contaminated water with the development of cases.

Another outbreak of infectious hepatitis apparently due to a water-borne agent has been reported by Neefe and Stokes (5). Between midsummer 1941

and midsummer 1943 an epidemic occurred in a number of Alberta communities in the Foothills Health District. Seventy-four cases occurred during the winter at Royalties, a town of 1,500, situated at the south end of the Turner Valley oil district. Twenty cases occurred at Millarville to the north and 30 others to the east at Okotoks, the main railroad centre serving the oil district. The town of Long View, a half a mile from Royalties and in close contact with it, escaped. In late September, 1942, the disease appeared in Mercury and Black Diamond. Both Royalties and Black Diamond are described as typical boom towns, characterized by poor housing, earth privies, private wells and the lack of piped water supplies for domestic use. In the families affected, 38 different water supplies were used by 56 homes. The incubation period was found to vary from 20 to 35 days according to Somerville and Clark (6).

Numerous cases occurred in families. In 32 families comprising 164 individuals, 82 persons (50 per cent) became infected. At Millarville, one family of 11 members became jaundiced. Homes in the area were small and close contacts were numerous. The seasonal distribution of cases was studied in 109 cases. The highest incidence, 24 in number, occurred in January. The lowest case incidence was recorded in August and June. Somerville and Clark (6) suggest that the disease is spread by droplet infection and that control efforts should be directed towards the improvement of personal hygiene. A 10-day isolation period for cases was also proposed. The age and sex distribution in a series of 113 cases showed that 83 cases developed in the 9 to 14 age group and altogether 58 males and 55 females developed jaundice.

In 1950, Balance (8) studied the mode of transmission of 52 cases of infectious hepatitis at a small Oxford University College. He concluded that spread occurred by personal contact or through consumption of food or drink containing virus. The vehicle of infection was custard served at a dinner and a lunch on consecutive, specified dates.

THE RICHVALE EPIDEMIC

We have recently studied an epidemic in Richvale, Ontario, a small rural residential community in the County of York 14 miles north of the city of Toronto, where the area involved measured approximately half a square mile. Of a total of 50 cases, 38 were concentrated in three adjacent streets.

The epidemic commenced in June of 1952 and 50 persons developed jaundice. Groups of cases occurred at intervals throughout the summer months of 1952 as well as in the fall and winter of 1953. The last case was reported in May, 1953.

Domestic, Age and Sex Incidence

Altogether thirty homes were involved and from seventeen of these a single case was notified from each. From eleven homes 22 cases were reported. In the twelfth home, 4 cases occurred, and in the thirteenth home 7 members of the family developed jaundice.

The youngest child showing jaundice was 2 years old and the oldest was a man aged 52. In the series of 50 cases, 25 were between the ages of 9 and 16,

and of these 14 were males and 11 females. However, data relating to age incidence may be deceptive since it is well known that infective hepatitis is often a very mild disease among infants and consequently the true incidence of infection among the younger age groups may not be revealed. (See Horstmann, Havens and Deutsch (3).)

The clinical features and incubation period of jaundiced cases encountered in the Richvale area conformed with the characteristic pattern of infectious hepatitis. During the conduct of our investigations we made inquiries to determine whether the seasonal rise and fall of cases in the Richvale area could in any way be correlated with weather conditions. In the opinion of Mr. Andrew Thomson, Controller of the Air Services, Meteorological Division of the Government of Canada, no such relationship could be adduced.

Similarly, no correlation could be demonstrated between the localization of cases and individual water supplies. Thus, family outbreaks occurred at 15 homes where the water was contaminated and 15 other homes where the water was apparently free from *B. coli*.

A general assessment of the affected area as a whole indicated that it represented a new housing development in the suburbs of Toronto. Property owners within the zone may be described as persons of modest means and perhaps as fugitives from the high taxation of city areas. The majority of the homes were constructed by the owners themselves and comprised wooden frame structures in varying stages of completion. Invariably, occupancy of the home had occurred long before provision of even the most rudimentary sanitary and ablution facilities. Although the majority of home owners in this area were presumably unable to afford the necessary expenditure for provision of wash basin and toilet fittings, a few nevertheless appeared to be able to complete the necessary financing arrangements for the purchase of a television aerial and receiver. The disposal of faeces was effected in several homes by a bucket and spade; in others, by earth privy, and in a few by septic tank system. Amid such circumstances it is scarcely necessary to draw attention to the difficulty of caring for infants and young children.

To sum up, it may be said that the sanitary standards of the community were low and the high incidence of family cases was probably attributable to the lack of domestic wash hand basin, kitchen sink, toilet facilities and piped water supply. The persistence of cases throughout the winter months suggests aggravation of sanitary problems during periods of cold weather, with correspondingly greater opportunities for household contact infection. In the Richvale epidemic, it is more probable that family cases were due to poor personal hygiene rather than to dissemination by consumption of polluted drinking water.

Further evidence pointing to infection acquired in the homes is provided by the absence of data indicating contact infection among children of this area attending the new village school, where high standards of personal hygiene and sanitation were enforced. Likewise, the disease did not appear to have spread to other children living in an adjacent community, although they also attended the same school, during the epidemic period. An inspection of the school revealed that the building and fittings were of modern construc-

tion and that all pupils were compelled to wash their hands with soap and water at the Bradley fountain before their daily meals.

DISCUSSION

Many excellent epidemiological studies on infective hepatitis have already been reported from Great Britain, Palestine, Egypt, North Africa and Italy during World War II and the years following it.

Since the incubation period of the disease is a long one, it has been difficult to study its mode of transmission under war-time living conditions, when rapid movements of civilian and military personnel are liable to occur. Likewise in tropical and subtropical climates, the high incidence of pyrexial and gastro-intestinal diseases, both of known and unknown origin, further confuse the clinical diagnosis and epidemiological pattern of the disease. To these obstacles must be added other possible causal factors which must be taken into consideration, such as the possible role of arthropod and insect vectors which exist in close proximity to human cases.

Canada presents opportunities for research into the aetiology of infective hepatitis which are hard to match elsewhere. Successive epidemics have been reported from relatively isolated and static communities situated in sparsely populated areas separated by great distances. Here the disease tends to occur during the winter months of the year when biting arthropods are absent and can certainly be excluded as aetiological factors. Household cases are numerous, and due to the low winter temperature in certain areas, extramural person-to-person contacts are reduced to a minimum. When such do occur, the movements of individuals are often easy to trace, and past history of social contacts is comparatively easy to recapitulate.

Epidemiological studies on the aetiology of infective hepatitis in Great Britain, the Middle East and elsewhere have failed to reveal the mode of spread of infection. The data indicate that many factors may be involved. Spooner (7), for instance, pointed out that in certain Eighth Army regiments where 8 to 9 per cent of the total strength were affected, as much as a third of the officer personnel were affected and the latter were 4.7 times as prone to infection as other ranks. In certain units of the U.S. armed forces, such as in air crews where men and officers served together, Havens (2) has drawn attention to the equal distribution of cases. The situation as applicable to the disease in Great Britain has been summarised by MacCallum et al. (4), who, writing in the Medical History of the Second World War, stated that "Epidemics are commonest among school children and hospitals, but in general, class selection is lacking, the disease spreads by personal contact irrespective of age, sex or what section of the community the individual may belong to, civilian or military."

In the light of recent knowledge, Knight et al. (9) studied the spread of an epidemic during 1951 which affected the schools and households in a rural area of Missouri. They found that schools appeared to be the chief centres for dissemination of the disease to families and that 10 per cent of children who never exhibited jaundice during the epidemic showed physical and laboratory evidence of hepatitis.

The evidence as we have found it at Richvale points to the close association of this disease to the conditions amid which individuals or groups of individuals live. From the practical aspect of public health, the housing and living conditions we have described at Richvale are reduplicated throughout Canada as an inevitable outcome of rapidly expanding economic and industrial development. It is possible that the highest incidence of the disease may be expected from this section of the population.

SUMMARY

Factors associated with an epidemic of 50 cases of infective hepatitis affecting a new owner-built housing development in rural Ontario have been described. The occurrence of family cases has been a noteworthy feature of this epidemic.

ACKNOWLEDGEMENT

This work has been conducted under grant #382 awarded by the Defence Research Board of the Department of National Defence, Ottawa, for studies on the aetiology of infectious hepatitis.

REFERENCES

1. Fraser, R., *Canad. Pub. Health J.*, 1931, **22**: 396.
2. Havens, W. P., *J. A. M. A.*, 1944, **126**: 17.
3. Horstmann, D., Havens, W. P., and Deutsch, J., *J. Pediat.*, 1947, **30**: 381.
4. MacCallum, F. O., Bradley, W. M., van Rooyen, C. E., and Sheehan, H. L., *History of the Second World War, Medicine and Pathology*. London: H.M. Stationery Office, 1952, p. 252.
5. Neefe, J. R., and Stokes, J., *J. A. M. A.*, 1945, **128**: 1063.
6. Somerville, A., and Clark, J. S., *Canad. M. A. J.*, 1944, **51**: 120.
7. Spooner, E. T. C., *Proc. Roy. Soc. Med.*, 1944, **37**: 171.
8. Balance, G. A., *Brit. M. J.*, 1954, **1**: 1071.
9. Knight, V., Drake, M. E., Belden, E. A., Franklin, B. J., Romer, M., and Copple, L. O., *Am. J. Hyg.*, 1954, **59**: 1.

Poliomyelitis in the Province of Newfoundland, 1953

A. O. D. McDERMOTT, M.D.

Chief Medical Health Officer

Department of Health

St. John's, Newfoundland

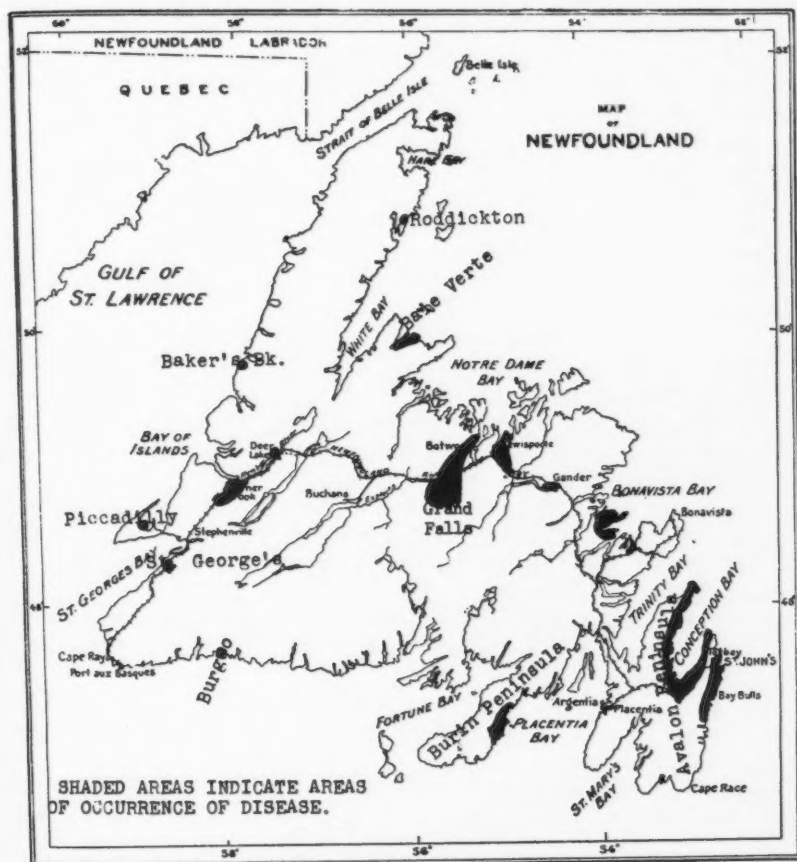
THE 1953 outbreak of poliomyelitis in the Province of Newfoundland was the largest reported since accurate recording of infectious diseases was instituted by the Department of Health. A total of 232 cases was reported. This is in contrast to the previous years, 1948, '49, '50, '51 and '52, when the number of cases was 2, 19, 5, 9 and 6, respectively. Evidence of gross deformities in many adults indicates that undoubtedly large-scale epidemics had occurred before 1948, but it is impossible to arrive at any estimate of numbers, regional distribution of the disease, or the severity of the epidemics. The possibility of an epidemic during 1953 had been anticipated; indeed, due to the presence of a young non-immune population, it was more or less to be expected.

Reported cases during the 1953 epidemic were checked as far as possible. Considering the difficulties in communication, it is safe to say that the reported incidence was a fairly accurate index of the occurrence of the disease. Doctors were advised to notify the Department of Health, by telegram, of cases, stating the extent and severity of paralysis and indicating whether they wished the patient to be hospitalized. Mild cases of abortive or non-paralytic type were usually kept under observation at home. Those showing paralysis with any degree of severity were hospitalized in St. John's Isolation Hospital. In all, 149 cases were admitted to the Isolation Hospital in the acute stage of the disease.

Patients living on the Avalon Peninsula were transported by road, but those living on the rest of the Island were moved by air. It was decided to use air transport as much as possible in view of the reports that long and tiresome journeys by road and rail had detrimental effects on the course of poliomyelitis. Having regard to this, patients living on the Burin Peninsula, who could reach St. John's only after an eight-hour journey on a second-grade road, were flown to hospital. This necessitated 33 special flights which were carried out by the Eastern Provincial Airways. A total of 39 patients were transported to hospital at a cost of \$10,109. In addition, several flights were made by the R.C.A.F. both for the purpose of transporting "iron lungs" and endeavouring to pick up patients where the Eastern Provincial Air Lines were unable to perform these flights. The fact that well over half the cases occurred on the Avalon Peninsula was instrumental in keeping down the number of flights.

This was only to be expected, as the distribution of the population is preponderant on the peninsula.

The disease first appeared on April 20th, with the occurrence of a paralytic case in Green's Harbour, Trinity Bay. The next case occurred on May 10th in Hopedale, Labrador—again with severe paralysis. Two cases occurred in June. Around the middle of July, notifications of the disease came with



regularity. In July, 10 cases were notified; in August, 89, and in September 88. The peak week was that ending September 5th, when 33 cases were notified. There was a gradual decline to a total of 7 cases notified during the month of December.

The areas most affected were the Avalon Peninsula and the north and east coasts, with concentration of the disease in the Western Bay and Baie Verte areas. The west and the south coast were singularly free of the disease, a total of only 8 cases occurring. There were eight cases in Labrador.

Prophylaxis

Close liaison was kept with the Gamma Globulin Advisory Committee. Telegraphic reports of the number of cases occurring were sent to the committee as soon as there was a significant increase in the incidence of the disease. The first allocation of gamma globulin was received at the beginning of August and was used in the areas where the disease was most prevalent, viz. Ming's Bight in Baie Verte and in the western side of Conception Bay. Department of Health nurses were sent to these areas to help the local doctors in the administration of the gamma globulin. A total of 423 persons received the serum. Its use was confined to children who were family contacts and to those directly connected with the handling and transporting of patients, e.g. hospital nurses and air company personnel. The quantity of gamma globulin was extremely limited in the beginning, but with improvements in supply, it was made available to more groups. There have been no reports of poliomyelitis in anyone who received gamma globulin.

No restriction of movement or quarantine of contacts was imposed, as it was felt that these measures are ineffective. Patients themselves were isolated for two weeks from the start of the illness.

The reopening of schools presented a vexed question. A survey of the other Provinces showed a great diversity of opinion on policy. Public opinion was the deciding factor, and the schools did not reopen till September 21st. In line with this policy, children of school age were barred from churches and cinemas for the same period. Ready and excellent co-operation was received from the ecclesiastical authorities and cinema managers.

A breakdown of the cases is as follows: total number of cases, 232; number of non-paralytic or abortive cases, 52; number of mild cases, 71. Cases were classified as mild when they showed transient weakness or partial paralysis of one or a few groups of muscles.

Seventy-six cases were classified as moderately severe. In these the damage was more extensive than in the mild cases—usually involving one complete limb.

Ten cases are now classified as severe. Severe and disabling residual paralysis remains in two or more limbs, rendering the patient helpless and an economic liability.

In addition there were 18 bulbar cases. Seven of these died and five others succumbed without bulbar symptoms. The total number of deaths was therefore 12. Eleven cases were treated in respirators in the acute phase and of these three died. No patients are in respirators at the present time, although one case is occasionally returned to the "iron lung" due to respiratory difficulty.

The criteria of diagnosis were:

- (1) A history of contact with the disease.
- (2) A history of febrile illness, weakness or paralysis.
- (3) Febrile illness with signs of meningeal irritation or nuchal rigidity.
- (4) Cerebrospinal fluid changes. (C.S.F. changes were an increase in the

white cell count, a positive Pandy test for globulin and an increase in the total protein content, whilst the rest of the C.S.F. chemistry remained normal. These changes, in the absence of demonstrable organism in the C.S.F. and in the presence of epidemic poliomyelitis, were considered pathognomic.)

The presence of two or more, or in some cases one, of the above-mentioned criteria was considered sufficient for establishing a diagnosis.

Treatment in hospital was as conservative as possible. An initial lumbar puncture was done on entry to establish the diagnosis. Except in cases where some doubt arose due to variations in the C.S.F. chemistry, no further examination of C.S.F. was made.

Patients with severe and painful spasm of muscle were treated with hot packs and analgesics. Light splinting was employed to prevent deformities but was kept to a minimum.

As has been mentioned, 11 cases were treated in respirators either of the tank or Nuffield types or by means of portable chest respirators. On the whole it was found much more satisfactory to treat the severe cases in the tank type of respirator, but the portable chest piece was found very useful, especially in "weaning" patients from the "iron lung".

In no case was tracheotomy considered necessary. Free airway could be maintained in all severe cases with the use of ordinary suction. There was, in the severe bulbar cases, a considerable fluid loss due to suction, and care was taken to replace this by the intravenous route to maintain the body fluid level. Special watch was kept on the serum potassium, which showed early and rapid depletion.

Stools from paralytic cases were sent to the Virus Research Laboratory in Toronto for the purpose of identifying the type of virus. Reports on four specimens showed the presence of Type I or the Brunhilde type of virus.

Patients in hospital were isolated for 14 days, after which they were considered non-infectious, for practical purposes. Cases showing no paralysis on discharge medical were sent directly home. Those showing any degree of paralysis were transferred to the Orthopaedic Hospital. After examination, many of those with only slight degrees of paralysis were discharged in a short time. At the present time 52 cases with varying degrees of disability are still under treatment as in-patients. The Government cost of hospitalization to date for these patients is \$45,598.

Provision had to be made for a big increase in the patient population in both the Isolation and the Orthopaedic Hospitals. Extra accommodation was arranged in the Isolation Hospital by evacuation of one floor which had been used for the treatment of tuberculous meningitis. These cases were transferred to the St. John's Sanatorium. In the Orthopaedic Hospital extra wards were opened up and extra nursing staff employed. It was found necessary to hire three extra physiotherapists, who worked long hours to ensure that no patient was neglected.

Elaborate plans were made for the evacuation of other buildings and for the staffing and equipping of a temporary hospital to accommodate the over-

flow, should this become necessary. Fortunately, sufficient accommodation was available in the Orthopaedic Hospital.

Respirators were purchased and borrowed to meet the emergency. We are indebted to the United States Air Force, the Naval Hospital and the Victoria General at Halifax for their ready and rapid co-operation.

Respirators were placed in Cottage Hospitals at strategic points throughout the Province. This action was instrumental in saving at least one life.

Early in August a Poliomyelitis Advisory Committee was set up by the Department of Health in conjunction with the Newfoundland Medical Association. Weekly meetings were held in August and September at which difficulties were discussed, decisions of importance made, and policy outlined by the Committee. The committee still meets at monthly intervals in preparation for any future outbreak.

The total cost of poliomyelitis to the Province in 1953, taking into consideration transport, hospitalization, purchase of equipment and salaries of extra staff required to deal with the outbreak, is conservatively estimated at \$90,000-\$100,000. This does not take into account the economic loss due to permanent disabilities, which at present it is impossible to evaluate.

Letter from Great Britain

The Manchester University Teaching Health Centre

FRASER BROCKINGTON

M.R.C.S.(Eng.); L.R.C.P.(Lond.); D.P.H.; B.Chir., M.D.(Camb.),

M.A.(Camb.); Barrister-at-Law

Professor of Social and Preventive Medicine

University of Manchester

Manchester, England

ON June 9th the Minister of Health, The Right Honorable Iain MacLeod, declared the Manchester University Teaching Health Centre to be open. The Centre is in an adapted building rather more than a stone's throw from the Manchester Royal Infirmary. The Nuffield Provincial Hospitals Trust bought Darbshire House and made a grant of £20,000 to meet the cost of adaptation. The Rockefeller Foundation has provided £10,000 for equipment and has given £20,000 to meet extraordinary expenditure during the first years of operation. The University will meet the research and teaching costs. The City of Manchester will contribute £3,500 a year towards the maintenance for three years and we hope for longer. The Centre will meet a long-felt want, and its fulfilment after four years of discussion and negotiation has been awaited with lively anticipation.

Four general practitioners have entered into an agreement with the University to practise from the Centre. Each is provided on the ground floor with his own suite of rooms for consultation, waiting and examination. The doctors are also provided with facilities for the simpler X-ray examinations and routine pathological, bacteriological and chemical tests. Secretarial staff and centralised records will aid them in their work. The Centre has three home nurses who will combine the work of nursing in the Centre with home nursing of the families under the doctors' care.

It is hoped in the course of time to bring other socio-medical workers, e.g. health visitors, into a close relationship with the Centre. As a step in this direction, a voluntary family welfare service giving psychiatric guidance is shortly to work from the Centre. A social worker will be appointed to the staff.

The general practitioners have agreed to limit their practice to 2,750 patients, making a total of about 11,100 persons or 3,000 families. Each doctor will eventually work in the preventive clinics of the School Health and Maternal and Child Health Services which occupy the first and second floors of the building.

The Health Centre is administered by a Board of Management consisting of four university representatives (the Vice Chancellor, the Professors of Medicine and of Social & Preventive Medicine and the Dean), three representatives of

SCALE IN FEET



GROUND FLOOR GENERAL PRACTITIONERS

GROUND FLOOR

1. Waiting room
2. Lobby
3. Examination room
4. Consulting room
5. Reception room
6. Consulting room
7. Lobby
8. Examination room
9. Waiting room
10. Office
11. Entrance hall
12. Waiting room
13. Lobby

14. Examination room
15. Consulting room
16. Doctors' toilet
17. Lift
18. Cleaners' room
19. Waiting room
20. Lobby
21. Examination room
22. Consulting room
23. Women's toilet
24. Men's toilet
25. Pharmacy
26. Caretaker's fuel store
27. W.C.

FIRST FLOOR MATERNITY & CHILD WELFARE CENTRE ANCILLARY C.P. SERVICES

FIRST FLOOR

28. Consulting room
29. Waiting room
30. Weighing room
31. Sterilising room
32. Reception room
33. Treatment and Physiotherapy room
34. Food sales room
35. Clinical laboratory
36. X-ray room
37. Waiting room and dressing cubicles
38. Staff toilet
39. W.C.
40. Cleaners' room

- Maternity and Child Welfare

SECOND FLOOR SCHOOL HEALTH CLINIC CARETAKERS' FLAT

SECOND FLOOR

41. Consulting room
42. Doctors' toilet
43. Waiting room
44. Reception room
45. Girls' toilet
46. Boys' toilet
47. Office
48. Liaison officer
49. Staff room
50. Bedroom
51. Reception room
52. Sitting room
53. Kitchen/dining room
54. W.C.
55. Bathroom
56. Store
57. Lift access room

- School Health

- Caretaker's flat

the Manchester City Council, two of the Manchester Executive Council and one of the Manchester Local Medical Committee. For the day-to-day management there is a committee of doctors—two from the University, one from the city corporation, and the four general practitioners. The Medical Officer of Health of the City is a member of both the Board and Committee of Management. A reader in Social Medicine has been appointed to my staff, and part of his duties is to act as the Liaison Officer at the Health Centre. One of his main functions will be to organise the teaching of medical students.

The Health Centre project rests on four basic objectives: (i) the provision of first-class medical care for the inhabitants of a densely populated area; (ii) the demonstration of the proper integration of preventive and curative services as represented by the present health service of the local authority, the family-practitioner service and the hospital-specialist service; (iii) development of an instrument for undergraduate medical education which can leave the present emphasis given to hospital medicine; and (iv) the demonstration of how medical care can take account of the social factors in the causation of disease both in the individual and in the community. These will be developed in succession. Stage (i) in which we now are placed may take between one and



Clinical Laboratory



Treatment Room for Home Nurses

two years. The process of transforming four independent practices to an entirely new setting with its many individual problems cannot be unduly hastened. The local authority clinics will come in at the end of 18 months or earlier. Undergraduate education may begin in 1956. The objective of research under the guidance of the Department of Social and Preventive Medicine, although last on the list, can be said to have begun already with the collection of basic data. One or more of the practitioners will take part in the Medical Research Council's study of the incidence of sickness in general practice which Dr. Logan of the General Registry Office is conducting.

The general practitioners are not in the direct employment of the University. They are, however, on the staff of the University as 'Instructors in general practice'. The main source of their income will continue to come from the funds of the Executive Council, supplemented by an annual payment for teaching from the University, fees from the Manchester Corporation for work in the preventive clinics, and by other fees from the Regional Hospital Board for sessions undertaken in hospital as clinical assistants. The total income, with

the reduced number of patients, will be much the same in amount as each doctor received previously in private practice. The University, backed by The Rockefeller Foundation, has guaranteed for seven years a certain basic income (roughly equal to what the practitioner was receiving in 1952).

The Manchester Health Centre scheme has the advantage of being securely based upon the agreement of many interested parties. It arises out of the National Health Service, without which it is unlikely that it could have been undertaken. It has its roots in history dating back to the Dawson of Penn report in 1920. It is an empirical adventure built upon general practice and public health as they have developed over the past century. Yet it comes at a time of disillusion, when after five years the local authority health centres have failed to materialise and when national thought is moving towards group practice as a better alternative. If there is any solid basis to the ideological concept of unifying general practice with public health and social medicine, here, at long last, is the opportunity to test it.

Local Health Department Participation in a Rodent Plague Survey

ERIC W. GRANT, C.S.I.(C.)

AND

G. L. SMITH, C.S.I.(C.)

*Victoria-Esquimalt Health Department
Victoria, B.C.*

VARIOUS references in the literature on rodent plague indicate the probability of reservoirs of infection, in dormant state, among the rodent population of North American communities (1). It is assumed that this danger is very real in sea-port cities, with the attendant shipping, mixing of populations and distribution of cargoes.

With this possible danger in mind, and in line with recommended public health practice (2), plague survey work has been conducted for some time in this Pacific coast port. This work, started sixteen years ago by the National Department of Health and Welfare as part of a nation-wide defense against plague following a death from this disease in Alberta (3), is now carried out by a local sanitary inspector normally engaged in rodent control. For one week in every three months he puts aside his Warfarin and allows the rat complaints to go unattended while he works with his traps and dissection instruments in the collection of samples for submission to the Dominion Laboratory of Hygiene at Kamloops, B.C.

The knowledge and skills required for this work include the ability to trap rats, the necessary dexterity in proper dissection, and the ability to recognize conditions and abnormalities which may be pathological in the rodents. Necessary equipment includes traps, dissection trays fitted with spring tension clamps, scalpel, scissors, tweezers, rubber gloves and Dettol or other suitable germicide, and Cyanogas with gas-tight receptacle. Shipping containers complete with shipping cards, screw-cap bottles with saline solution for tissue, and vials for fleas are supplied by arrangement with the laboratory.

Routinely the spleen, inguinal and axillary lymph glands, and lung and liver portions, together with any abnormal tissue, are submitted. Specific instructions from the laboratory are followed closely. All fleas and other ectoparasites are submitted and if sufficient in number, could preclude the necessity of previously mentioned tissue submissions.

It has been suggested that a more effective control of plague would be achieved by concentration on the eradication of rodents and that rodent control should not be complicated by sampling routines. The absence of positive findings and the fact that reports are not always received on samples

Based on a paper given at the Sanitarians' Sectional Meeting of the British Columbia Public Health Institute, Vancouver, April 12, 1954.

submitted could tend to discourage the inspector from enthusiastic participation in plague survey work. However, a study of the incidence and nature of plague will dispel any such doubts. Sudden outbreaks of plague and finding of positive specimens have occurred on this continent in significant numbers during this century. The locations involved include most of the countries in North and South America (4). Positive specimens have been found as close to home as Tacoma, Washington (3), and in British Columbia (3) as recently as 1950. An even more recent positive finding is reported in sagebrush voles in Washington State in 1953 (5).

The inspector engaged in this program is impressed with the complementary nature of his rodent control and plague survey work. In addition to enlarging his understanding of rodents in general, the following specific and unanticipated aids to rodent control have resulted from the survey work:

1. Trapping procedures carried out at regular intervals afford valuable knowledge of the infestation and rate of re-infestation at known trouble spots.

2. Examination of stomach contents indicates the acceptability of various baits. Such examinations could, of course, be made at any time but in actual practice are not conducted except in the process of plague survey work.

3. Periodic trapping and dissection affords the opportunity to determine the number of embryos in the pregnant females. This is a vivid and sometimes necessary reminder of the tremendous reproductivity of rodents. In recent trappings five rats yielded 62 embryos.

4. The survey work provides, over a period of time, incontrovertible evidence of rat infestations in certain locations such as open face dumps, piggeries, beach areas, picnic grounds, etc. It indicates the ineffectiveness of occasional rat eradication campaigns and shows clearly the need for a constant and continuing rodent control program.

5. The educational value of this work is apparent in the interest shown by the newspapers, the public, the health committees and councils concerned and, individually, by the improvement taking place in the establishments where trapping is conducted. People who previously had failed to recognize the danger of rat infestations have become sanitation-conscious.

A recent incident in this city illustrates very clearly the possibility of transmission of plague infection. The area adjacent to the grain elevator at the Ogden Point Dock became infested by a sudden invasion of tremendous numbers of rats (6). This infestation, strictly localized in the dock area, was presumed to have come from a cargo vessel which had been moored without adequate precautions. Fortunately the infestation was reported and dealt with immediately—but, had these presumably immigrant rodents been infected and had they been permitted to mingle with the resident rat population, it is quite conceivable that this area might have experienced an outbreak of plague reminiscent of those that have occurred in other sea ports.

It must be concluded that rodent control work and rodent plague survey work are both necessary and that, rather than conflicting with each other in practice, the two programs are complementary. They supplement each other

and enable the sanitary inspector to attain an extremely wide and effective control over a hazard that otherwise could endanger the community.

SUMMARY

1. There is a possibility of dormant plague infestation in rodent populations of North American communities.
2. This danger is recognized in Victoria, B.C., and plague survey work is carried out by a local sanitary inspector.
3. Requisite skills, equipment and procedures for this work are listed.
4. The value of plague survey work to the inspector normally engaged in rodent control is discussed.

REFERENCES

1. Plague in Colorado and Texas. U.S. Public Health Service. Publication No. 210, 1952.
2. Mohr, Carl O., Domestic Rats, Fleas and Native Rodents in Relation to Plague in the U.S.A. Com. Dis. Control Bull., 1948, July-August-Sept., 1948, 1-21.
3. B.C. Health, January, 1951. Department of Health and Welfare, Health Branch, Victoria, B.C.
4. Hoekenga, Mark T., Plague in the Americas. J. Trop. Med. & Hyg., 1947, 50: 190-201.
5. Hartigen, C. F., Report to Sanitary Inspectors Sectional Meeting, B.C. Provincial Health Institute, 1954.
6. Rodent Control File, Victoria-Esquimalt Health Department, 1947 Cook Street, Victoria, B.C.

A Study of Acid-Fast Bacilli Recovered from Tuberculous Monkeys

H. C. PLUMMER and M. H. BROWN
*Connaught Medical Research Laboratories
University of Toronto, Toronto*

IT is known that monkeys are very susceptible to tuberculosis. Rabino-witsch (5) obtained acid-fast bacilli from monkeys that had died in the Zoological Gardens in Berlin, and found that 25 were of human type, 3 of bovine type, 1 avian and 3 of intermediate character. From another monkey, 2 types were obtained, human from the lungs, and bovine from the spleen. Griffith (2) investigated 28 cases of natural tuberculosis in monkeys and found 20 infected with human and 8 with bovine type bacilli. Brown (1) examined 5 strains of acid-fast bacilli isolated from monkeys that had widespread tuberculosis. They were all bovine type bacilli. Schroeder (6) stated that the tuberculosis mortality rate in primates kept in laboratories and zoological collections is 10,000 per 100,000, and that the human type of acid-fast bacillus is usually found. Kennard *et al.* (3, 4) found the incidence of tuberculosis to be 30% in the monkey colony of the Yale University School of Medicine.

In the present investigation, tissue specimens from 16 tuberculous monkeys were submitted to us by Dr. A. J. Rhodes, working under a grant from the National Foundation for Infantile Paralysis at the Connaught Medical Research Laboratories. Fourteen of the monkeys had been housed at the Laboratories for several months while undergoing immunization with the Lansing poliomyelitis virus. Two (M8 and M10) were found to be tuberculin-positive at Okatie Farms, N.C., and were autopsied immediately after arrival at the Laboratories. All monkeys were tuberculin-positive, and some showed such symptoms as loss of weight and coughing, before being killed. We have endeavoured to isolate and identify the types of acid-fast bacilli infecting these monkeys.

METHODS

The 16 monkeys were sacrificed, and the autopsy findings carefully recorded by Dr. W. Wood working in conjunction with Dr. Rhodes. Pieces of infected tissue were sent to our laboratory, where they were minced with scissors and ground in saline with sterile mortar and pestle. A slide was prepared from each tissue suspension, stained with Ziehl-Neelsen stain, and examined microscopically for acid-fast bacilli. One ml of each suspension was injected subcutaneously into the right groin of a normal guinea pig. Four months or more after inoculation, 10 of the guinea pigs were injected intracutaneously with 1 mg Old Tuberculin. The other 6 animals had died before being tested. Each

guinea pig was autopsied and a freshly cut surface of infected tissue rubbed over the surface of egg medium for the purpose of recovering acid-fast bacilli. When such bacilli were recovered in pure culture, they were injected intravenously into rabbits.

RESULTS

Table I shows a summary of the autopsy findings of 15 monkeys. The record for monkey labelled "X" was not available. It may be seen that tuberculous

TABLE I
SUMMARY OF RESULTS FROM AUTOPSIES OF TUBERCULOUS MONKEYS AND OF
GUINEA PIGS INOCULATED WITH TUBERCULOUS MONKEY TISSUE

Monkeys*						Guinea Pigs							
Animal No.	Lungs	Lymph Nodes	Liver	Spleen	Kidneys	Animal No.	Death†	Months on Test	Amount of Tuberculosis‡	Heart Blood Culture§	Recovery of A-F Bac.		
											Tissue¶	Medium**	
												D.	L-J
X						241	C	2	Gen.		I.G.	0	++
A-810	2+	2+	2+	2+		248	C	4	Loc.		L.L.	0	+
808	2+	2+		1+	1+	273	D	13	None	G-Bac.	I.G.		
328				1+		286	D	13	None	G-Bac.	Dig. T.		
250	3+	2+	3+	3+	3+	287	D	7	Loc.	G-Bac.	Dig. T.	+	
155	1+	2+		1+		289	C	17	None				
152	3+	2+		2+		270	C	9	Loc.	Sterile	I.G.	0	+
229	1+	2+	1+	1+		271	C	17	None				
158	2+	2+	2+	2+	3+	272	D	9	None	G-Bac.	I.G.		
237	2+	2+		1+		160	D	17	Gen.	G-Bac.	Dig. T.		+
168	3+	2+	2+		1+	278	D	8	Loc.	G-Bac.	Dig. T.	0	
201	3+	2+	2+	3+		281	C	17	None				
167	3+	2+	3+	2+		283	D	9	Loc.	Sterile	I.G.	0	+
437	2+	2+	2+	2+	1+	807	D	3	Gen.	G-Bac.	Dig. T.	0	0
M. 8	1+	2+	2+	2+		716	D	4	Gen.		Lung	0	+
10	2+	2+				723	D	6	Gen.	Sterile	Dig. T.		0

1+ Slight tuberculous involvement.

* 2+ Moderate tuberculous involvement.

3+ Extensive tuberculous involvement.

† C = Chloroformed; D = Died.

‡ Gen. = Generalized tuberculosis.

§ Loc. = Localized tuberculosis.

§ G-Bac. = Gram -ve bacilli.

|| A-F Bac. = Acid-fast bacilli.

¶ I.G. = Inguinal gland; Dig. T. = Digested tissue;

L.L. = Local Lesion.

** D = Dorset's medium; L-J. = Loewenstein-Jensen's medium.

†† + represents growth of acid-fast bacilli.

0 " " " " " "

lesions were present in the spleens of 13, and in the lungs and mediastinal lymph nodes of 14 animals. In addition, monkey A250 had slight tuberculous involvement of the peritoneum and brain, and monkey M8 moderate involvement of the skin, iliac and para-aortic lymph nodes. Widespread disease might be said to prevail in at least 13 of these monkeys. Microscopic examination of infected monkey tissue stained with Ziehl-Neelsen stain showed many acid-fast bacilli in 1 specimen (A158), and few in the other specimens. At least 40 fields of each slide were observed. The acid-fast bacilli were long and slender and usually showed blue granules. Cocci and sometimes bacilli were seen in certain specimens.

Tuberculin Reactions in Guinea Pigs Inoculated with Monkey Tissue

Ten of the guinea pigs, injected intracutaneously with 1 mg Old Tuberculin 4 or more months after inoculation with monkey tissue, gave a positive reaction, measuring at least 15 mm in diameter. The other 6 animals (241, 287, 278, 807, 716, 723) died before being tuberculin-tested. Three of the guinea pigs (289, 271, 281), which gave a positive tuberculin reaction when sacrificed 17 months after injection with monkey tissue, were perfectly normal at autopsy.

Findings at Autopsy of Guinea Pigs

Of the 10 guinea pigs that died after inoculation with monkey tissue, 4 (160, 807, 716, 723) appeared to have generalized tuberculosis as shown by caseous lesions in the liver and lungs, and by the enlargement of the spleen (Table I). Two of them (160, 807) also had a blood-stream infection with Gram-negative bacilli. It should be noted that an intercurrent infection with Gram-negative bacilli was present in the guinea-pig colony during part of the experiment. Three other animals (287, 278, 283) appeared to have localized tuberculous infection, as shown by enlarged inguinal glands and spleens. Two of these (287, 278) also had a blood-stream infection with Gram-negative bacilli. Three other animals (273, 286, 272) showed signs of infection of non-tuberculous origin, with no areas of caseation, and Gram-negative bacilli were recovered from the blood stream. In summary, 4 animals in this group appeared to have generalized, and 3 localized tuberculous infection, and 3 others had systemic infection with Gram-negative bacilli. Of the remaining 6 guinea pigs that were killed with chloroform, 3 (241, 248, 270) were sacrificed because of an open lesion at the site of inoculation. One of them (241), killed 2 months after inoculation, also had widespread tuberculosis. Guinea pig 248, killed 4 months after inoculation, showed no tuberculous involvement except the local lesion, whereas guinea pig 270, killed 9 months after inoculation, had enlarged inguinal glands, a moderately enlarged spleen and an ulcer at the site of inoculation. The other 3 animals (289, 271, 281) showed no abnormalities when sacrificed 17 months after inoculation with monkey tissue. Grouping together the 16 guinea pigs, 5 showed generalized and 5 localized tuberculous infection; the remaining 6 did not show evidence of tuberculous infection.

Isolation of Acid-fast Bacilli from Infected Guinea Pigs

The freshly cut surface of the left inguinal gland, opposite the site of inoculation, and in 1 case infected lung tissue, was rubbed over the surface of one or more kinds of egg medium. If the gland did not appear to be infected or if no growth of acid-fast bacilli occurred, pieces of infected liver, spleen, lung or inguinal gland that had been kept in the refrigerator were macerated in saline and spread over the surface of egg medium. Owing to the presence of a concurrent infection with Gram-negative bacilli in this group of guinea pigs, it was necessary in some instances to treat the specimens with alkali, followed by neutralization with acid, before planting on egg medium. From the 10 tuberculous guinea pigs, pure cultures of acid-fast bacilli were obtained from the inguinal glands of 3 animals, from the lung tissue of one animal, from the site of inoculation of one, and from the alkali-digested tissue of two

animals. From the remaining 3 animals whose specimens were alkali-digested, no acid-fast bacilli were obtained.

It was observed early in this work that these strains did not grow readily on Dorset's egg medium. Accordingly, 3 other types of medium, Loewenstein-Jensen's, Loewenstein-acid and Herrold's, were used. Table I shows that, of 8 specimens planted on Dorset's medium, growth occurred from only 1, whereas 6 out of 8 specimens showed growth on Loewenstein-Jensen's medium.

Rabbit Inoculation with Acid-fast Strains Isolated from Guinea Pigs Inoculated with Tuberculous Monkey Tissue

The 7 strains recovered from guinea pigs were injected intravenously into rabbits, and initially 1 rabbit was used for each strain (Table II). Those

TABLE II

SUMMARY OF RESULTS FROM AUTOPSIES OF RABBITS INOCULATED WITH ACID-FAST BACILLI RECOVERED FROM GUINEA PIGS INJECTED WITH TUBERCULOUS MONKEY TISSUE

Monkeys	Guinea Pigs			Rabbits				
	Animal No.	Months on Test	Death*	Animal No.	Months on Test	Tuberculin Reaction	Death	Autopsy Findings
X	241	2	C	21	6	+	Killed	Normal
A-810	248	4	C	2	8		Killed	Normal
250	287	7	D	3	6	+	Killed	Normal
152	270	9	C	4	5		Died	Enteritis
				5	6		Killed	Normal
237	160	17	D	6	6	+	Killed	2 small lung lesions
167	283	9	D	7	6	+	Killed	Normal
M- 8	716	4	D	8	1		Died	Diplococci
				9	4		Killed	{ Snuffles
				10	7	+	Killed	{ Tuberculosis Snuffles

* C = Chloroformed

D = Died

rabbits inoculated with 6 of the recovered strains of tubercle bacilli, when sacrificed 6 to 8 months later, showed no evidence of generalized tuberculosis. These 6 strains, judging from the lack of virulence in rabbits, are considered to be human type strains. Three rabbits were inoculated with the remaining strain (716) of tubercle bacillus. One rabbit died one month after injection, having generalized infection with Gram-positive diplococci. Another was killed at the end of 4 months because of snuffles, and showed generalized tuberculosis. The third rabbit, killed 7 months after injection, had severe snuffles but no tuberculosis. These findings indicate that this one strain (716) is a bovine type of acid-fast bacillus but of low virulence.

In order to confirm our findings, 2 strains (270, 283) were sent to Mr. William Steenken, Trudeau Laboratory, Trudeau, N.Y. He reported skin sensitivity in guinea pigs, but only a local non-progressive lesion. Six strains

were also sent to the Tuberculosis Laboratory of the Communicable Disease Center, Chamblee, Georgia. Reports from this laboratory indicate that strains 241, 248, 270, 160, and 283 were virulent for guinea pigs inoculated subcutaneously with doses of 5 mg. or 0.1 mg. On culture medium (Loewenstein-Jensen's) the colonies resembled human type tubercle bacilli. Strain 716 was reported to be virulent for guinea pigs inoculated subcutaneously with 5 mg. or 0.1 mg., and virulent for a rabbit inoculated intravenously with 0.1 mg. On Loewenstein-Jensen-Holm's medium, the colonies were dysgonic, white, pyramidal, and typical of bovine type tubercle bacilli. The findings of the three laboratories are not essentially different, except in the degree of virulence of the strains. Our results in guinea pigs are based chiefly on the primary passage from monkey to guinea pig. The strains tested in the other laboratories had already been passed through guinea pigs.

SUMMARY

Tissue from 16 tuberculous monkeys was injected subcutaneously into guinea pigs, one animal being used for each monkey. Six of the guinea pigs died before being tuberculin-tested. Each of the 10 remaining animals gave a positive reaction to 1 mg Old Tuberculin, when tested 4 months or more after inoculation with monkey tissue. Six of the tuberculin-positive animals showed no signs of tuberculosis when autopsied after 9 to 17 months on test. Five guinea pigs had generalized and 5 localized tuberculosis at the time of autopsy. Three others died from infection with Gram-negative bacilli, and the remaining 3 animals appeared normal when autopsied 17 months after inoculation with monkey tissue. Only 7 strains of acid-fast bacilli were recovered from the 10 tuberculous guinea pigs. Rabbits injected with 6 of the 7 isolated strains showed no signs of tuberculosis 6 to 8 months after inoculation. These 6 strains are considered to be avirulent human type bacilli. The remaining strain produced generalized tuberculosis in 1 of 3 rabbits injected, and is considered to be an avirulent bovine type bacillus.

REFERENCES

1. Brown, M. H., *Trans. Roy. Soc. Can.*, 1932, Sec. V, p. 295.
2. Griffith, A. S., *J. Hyg.*, 1928, 38: 198.
3. Kennard M. A., Schroeder, C. R., Trask, J. D., and Paul, J. R.: *Science*, 1939, 89: 442.
4. Kennard, M. A.: *Yale J. Biol. & Med.*, 1940, 13: 701.
5. Rabinowitsch, L.: *Deuts. Med. Wschr.*, 1906, 32: 866.
6. Schroder, C. R.: *Am. J. Pub. Health*, 1938, 28: 469.

Canadian Journal of Public Health

EDITORIAL BOARD

R. D. DEFRIES, M.D., D.P.H., *Editor*

J. T. PHAIR, M.B., D.P.H., *Associate Editor* R. L. RANDALL, *Assistant Editor*

J. H. BAILLIE, M.D., D.P.H. GORDON BATES, M.D. A. E. BERRY, M.A.S.C., C.E., PH.D.

J. G. CUNNINGHAM, B.A., M.B., D.P.H. C. E. DOLMAN, M.B., PH.D., D.P.H., F.R.C.P., F.R.S.C.

D. T. FRASER, M.C., B.A., M.B., D.P.H., F.R.S.C. EDNA L. MOORE, REG.N.

G. D. PORTER, M.B. A. H. SELLERS, B.A., M.D., D.P.H.

F. O. WISHART, M.A., M.D., D.P.H. J. WYLLIE, M.A., M.D., CH.B., B.S.C., D.P.H.

THE HEALTH OFFICER AND THE CANADIAN MEDICAL CARE CONFERENCE

IN CONJUNCTION with the forty-second annual meeting of the Canadian Public Health Association in Quebec, there was held this year the First Canadian Medical Care Conference. Following an organizational meeting at the Association's 1953 annual meeting, a steering committee was set up which planned the Medical Care Conference. This committee consisted of Mr. D. W. Ogilvie, of the Ontario Blue Cross Plan; Mr. C. Howard Shillington, of Trans-Canada Medical Plans; Mr. Bruce Power, of The Canadian Life Insurance Officers' Association; Dr. F. W. Jackson, of the Department of National Health and Welfare; Dr. G. H. Hatcher, of the School of Hygiene, University of Toronto; and Dr. J. H. Baillie, from the executive of the Canadian Public Health Association. The Association supplied secretarial office services, and the Quebec Organization Committee, under the chairmanship of Dr. Paul Claveau, made the local arrangements; in this connection, the assistance of Dr. A. R. Foley and Dr. Paul Parrot is gratefully acknowledged. The traditional hospitality of our French-Canadian colleagues of La Société d'Hygiène et de Médecine Préventive de la Province de Québec made the conference a social success.

An excellent series of papers was presented. Odin W. Anderson, who was well known at the Bureau of Public Health Economics at the University of Michigan before going to the University of Western Ontario and, later, to the Health Information Foundation in New York, presented a paper to the plenary session of the two conferences on the theme "The Social Objectives of Medical Care Plans". Survey papers were contributed on commercial medical care programs in Canada, on co-operative plans, and on government hospitalization insurance plans.

There were two major papers on individual medical care programs in Canada: one on the program of Manitoba Medical Service and the other on the indigent medical care program in Saskatchewan. Several discussants for each of these papers drew liberally on special studies they had undertaken or experience of their own programs, to raise fundamental issues of administrative practice. In addition, several papers at other sessions of the Canadian

Public Health Association were on medical care topics, and delegates of the Medical Care Conference were privileged to attend.

The success of this initial venture has encouraged the medical care group to continue on the same basis for another year. More time for discussion is planned for future meetings. It is hoped to secure publication of as many papers as possible from this meeting within the next few months.

The holding of the Medical Care Conference at the same time as the annual meeting of the Canadian Public Health Association emphasizes the new era into which public health is entering. There is an increasing acceptance by government of responsibility for the health of the people. This encompasses the training of professional personnel, the provision of hospital and other facilities, and the organization of methods for distributing the costs of medical care. Problems of medical care administration, including the prevention and treatment of chronic diseases, and rehabilitation, are now also the concern of health departments.

In the public health of the future, the health officer must be familiar with the practical details of medical care administration, if physicians are to continue to give leadership in reconciling the principle of public responsibility with that of professional control of professional matters.

AN INTERESTING EXPERIMENT

IN THIS ISSUE Dr. Fraser Brockington, Professor of Social and Preventive Medicine in the University of Manchester, tells of the opening of the Manchester University Teaching Health Centre, established through the co-operation of the Nuffield Provincial Hospitals Trust and The Rockefeller Foundation. The Corporation of the City of Manchester is also sharing in the cost of maintenance. The objectives will take time to achieve and the project will be developed in several stages. The first stage aims at providing first-class family-practitioner service. To this end, four family practitioners will serve as a group, practising from the Centre.

The eventual success of the scheme, which is the result of four years of planning, rests on providing the proper integration of preventive and curative services. That is why the attempt is being made to bring together the local-authority service, the family-practitioner service, and the hospital-specialist service. Darbshire House Health Centre will provide the first building where the three parts of the National Health Service may work together harmoniously under the family doctor, who constitutes such a vital part of the health services of the country.

At this time, when health officers everywhere are giving thought to plans for the development of health services and the extension of medical care, this undertaking will be followed with great interest.

CORRECTION

In the editorial, "Combating Poliomyelitis", published in the May issue (pp. 216-219), the dosage of gamma globulin as recommended by Dr. William McD. Hammon was incorrectly given as 0.1 cc. per kilogram of body weight. The average dose employed by Dr. Hammon was 0.14 cc. per pound, not 0.1 cc. per kilogram.

The Canadian Public Health Association

1953-54

PART II

REPORT OF THE EDITORIAL BOARD

R. D. Defries, M.D., D.P.H., Editor

J. T. Phair, M.B., D.P.H., Associate Editor

R. L. Randall, Assistant Editor

J. H. Baillie, M.D., D.P.H.; Gordon Bates, M.D.; A. E. Berry, M.A.Sc., C.E., Ph.D.; J. G. Cunningham, B.A., M.B., D.P.H.; C. E. Dolman, M.B., Ph.D., D.P.H., F.R.C.P., F.R.S.C.; D. T. Fraser, M.C., B.A., M.B., D.P.H., F.R.S.C.; Edna L. Moore, Reg.N.; G. D. Porter, M.B.; A. H. Sellers, B.A., M.D., D.P.H.; F. O. Wishart, M.A., M.D., D.P.H.; J. Wyllie, M.A., M.D., Ch.B., B.Sc., D.P.H.

A PROMINENT public health leader in the United States recently paid tribute to the Canadian Public Health Association. In the course of his remarks he stated: "If the Association had accomplished nothing beyond the publication of the Journal during the past forty years, all the work that has gone into the Association would have been well rewarded." The Association has contributed to medical literature a scientific journal which has been published without interruption since 1910. Taking into account its forerunner, the Canada Sanitary Journal, published from 1873 by Dr. Edward S. Playter, a practising physician of Toronto, Canada has had a national journal in the field of public health for a period equal to that of the Canadian Medical Association Journal and the American Journal of Public Health.

One of the basic problems of the Canadian Public Health Association as a whole lies in the diversity of interests of its members. Those who are engaged in public health nursing, or in sanitation, or in laboratory services, may feel that the Journal contains little of practical interest for them. Yet the Association in reality owes its strength to the bringing together of all those who are contributing to the public health program; it is the association of Canadian public health workers. Each of the professional groups within the association must continue to relate themselves to the professional society in the field in which they received their basic training; and the professional journals are the media for the presentation of the greater part of the advances in their special fields. The function of the Canadian Journal of Public Health is to present public health as a whole and to afford our members the opportunity of keeping in touch with what is going on in other fields of public health. Those who feel that the Journal has little of interest to them must remember that their service and their satisfaction in their work are dependent on a knowledge of the whole field of public health. It is for this reason that the Journal should be in the hands

Reports presented at the forty-second annual meeting of the Canadian Public Health Association, held in the Château Frontenac, Quebec, May 31-June 2, 1954.

of everyone in public health work, and each should maintain a file of the Journal for reference.

Because of the value of the Journal, the Provincial Departments of Health have endorsed a plan, outlined in detail in last year's report, which is making it possible for the Association to supply the Journal to all public health workers. In many of the Provinces the plan has been implemented, and it is hoped that ultimately the Journal will be made available to every public health worker in Canada who is a member of his Provincial Public Health Association (and thus automatically a member of the Canadian Public Health Association).

The cost of printing and mailing the twelve issues of the Journal published in 1953 was \$11,559.25, a decrease of \$523 below the figure for 1952. This, however, was offset by a reduction in the net revenue from advertising, which in 1953 was \$4,631.75 as compared with \$5,119.25 in 1952. No charge is made against the Journal for editorial services, office space, or general expenses, but even on this basis it is seen that in 1953 the publication and distribution costs represented one-third of the Association's budget. Each subscription represents a cost of \$4.97 to the Association.

The average circulation for the twelve months ending December, 1953, was 2,373 copies. They were distributed as follows: British Columbia 255, Alberta 24, Saskatchewan 78, Manitoba 193, Ontario, 907, Quebec 168, New Brunswick 75, Nova Scotia 143, Prince Edward Island 29, and Newfoundland 12, making a total for Canada of 1,884 copies. An additional 208 subscriptions in the United States, 137 in other countries, and a free and exchange list numbering 144, bring the total to 2,373. At the present time the circulation of the Journal is being steadily increased as additional members of the Provincial Public Health Associations are added to the subscription list.

During the coming months it is proposed to reorganize the editorial board for more effective functioning. The members of the present board will serve as an advisory group, while a small group of members will act as a managing committee.

During the past year the editorial board was again indebted to Dr. Fraser Brockington, Professor of Preventive Medicine at the University of Manchester, whose contributions to the Journal have kept our readers informed of developments in the public health field in Great Britain.

REPORT OF THE COMMITTEE ON PROFESSIONAL EDUCATION

Dr. R. D. Defries, Chairman

Dr. G. H. M. Hatcher, Secretary

Dr. G. F. Amyot, Victoria
Dr. A. E. Berry, Toronto
Dr. J. G. Cunningham, Toronto
Dr. O. H. Curtis, Charlottetown
Dr. C. R. Donovan, Winnipeg
Dr. Jules Gilbert, Montreal
Dr. Jean Grégoire, Quebec
Mr. J. M. Homer, Hamilton
Dr. D. L. MacLean, Toronto
Dr. J. A. Melanson, Fredericton
Dr. Leonard Miller, St. John's
Dr. Glenn T. Mitton, Toronto
Miss Edna L. Moore, Toronto

Dr. William Mosley, Toronto
Dr. G. W. O. Moss, Toronto
Dr. L. A. Pequegnat, Toronto
Dr. J. T. Phair, Toronto
Dr. D. S. Puffer, Toronto
Dr. J. S. Robertson, Halifax
Dr. F. B. Roth, Regina
Dr. A. H. Sellers, Toronto
Dr. A. Somerville, Edmonton
Dr. Aldwyn Stokes, Toronto
Dr. R. G. Struthers, Toronto
Dr. V. C. R. Walker, Toronto

IT IS OF INTEREST to note the major position which the Professional Examination Service now occupies in the work of the Committee on Professional Education of the American Public Health Association. Through the leadership of Dr. Lillian D. Long, director of the Service, and Dr. Reginald M. Atwater, executive secretary of the Association, an effective examination service extending far beyond the bounds of the Association has been established.

One step naturally leads to another. In 1935 the provision of grants-in-aid to the States, under the Social Security Act, required the adoption of a merit system for appointments in State and municipal departments of health. The appointments were to be made by an examination designed to assess the fitness of the individual for the particular appointment. The next step was the organization of the Committee on Professional Education in the American Public Health Association, to establish qualifications and standards for all personnel in public health. And the next step was the establishing of a Professional Examination Service which would ensure examinations that were adequate, uniform, and properly designed to assess a candidate's knowledge.

The Professional Examination Service employs the objective type of examination, in place of the usual essay type. It is recognized that the essay type of examination, limited to a few questions, cannot give a fair appraisal of the candidate's knowledge. The objective type presents many questions, each of which has been most carefully considered by experts after having been submitted by members engaged in rendering the services in the field.

So successful has the Committee been in the development of the Examination Service that examinations are now being provided for the personnel of the United States Public Health Service, for candidates entering schools of hygiene and medical colleges, for candidates seeking certification as specialists in public health by the Speciality Board of the American Medical Association, and for personnel of all grades as required for the services of State and municipal health departments. It is unnecessary to do more than mention the advantages of the Professional Examination Service. Applicants for appointment can be assured of a comparable examination, and the inadequacies arising out of examinations set by State and local authorities are removed.

Your committee in the Canadian Public Health Association has continued to review the progress of the Professional Examination Service of the American Public Health Association. The committee will have before it the question of introducing the objective type of examination in Canada and of profiting by the experience of the American Public Health Association in this important field.

A committee of the Dental Public Health Section of the Canadian Public Health Association has given consideration to the qualifications, training, and functions of the dental public health officer. They stress the preparation of the graduate dentist, if possible, in a school of hygiene where other professional groups in public health are being trained, as well as in the Faculty of Dentistry. It is desired that the candidate should receive training in public health administration and in the principles and practice of public health education. It is essential that he should be competent to give oral consultation, and he should have a background of post-graduate training which would prepare

him to participate in and forward research in the dental field. The committee has outlined a curriculum for post-graduate training for dentists in public health. This includes subjects presented in schools of hygiene and also clinical and laboratory instruction as provided in a faculty of dentistry. The committee has also outlined broadly the functions of the dental public health officer, giving due consideration to the importance of the administration of dental health programs and the relating of such service to the whole health organization. An important function is the interpreting of the dental needs of the community to his co-workers in the health department, to the local dental profession, and to the public. The promotion of programs designed to best meet the dental needs of the community and the stimulating of public relations in respect to dental programs were also stressed.

Your Committee on Professional Education is an advisory body, composed of representatives in the special fields, as well as in general administration. During the coming year it is planned to review the qualifications now adopted and to revise these as may be necessary.

REPORT OF THE COMMITTEE ON THE CERTIFICATION OF SANITARY INSPECTORS

A. E. Berry, M.A.Sc., C.E., Ph.D., Toronto
Chairman

R. Bowering, M.A.Sc., Victoria
O. H. Curtis, M.D., D.P.H., Charlottetown
R. D. Defries, M.D., D.P.H., Toronto
C. R. Donovan, M.D., D.P.H., Winnipeg
P. O'D. Gallagher, M.D., D.P.H., St. John's
Jules Gilbert, M.D., D.P.H., Montreal
J. M. Homer, C.S.I.(C.), Hamilton
T. J. Lafrenière, P.Eng., Montreal

F. L. Lunn, C.S.I.(C.), Brampton, Ont.
D. J. Mackenzie, M.D., Halifax
J. A. Melanson, M.D., D.P.H., Fredericton
William Mosley, M.D., D.P.H., Toronto
John F. Murrell, C.S.I.(C.), Vancouver
L. A. Pequegnat, M.D., D.P.H., Toronto
J. G. Schaeffer, M.A.Sc., Regina
D. R. Stanley, M.A.Sc., Edmonton
R. L. Randall, Toronto, *Secretary*

CENTRAL BOARD OF REGISTRATION AND EXAMINATION

Dr. A. E. Berry, Chairman

Dr. R. D. Defries
Dr. Jules Gilbert
Mr. J. M. Homer
Mr. T. J. Lafrenière

Mr. F. L. Lunn
Dr. Wm. Mosley
Dr. L. A. Pequegnat
Mr. R. L. Randall, Toronto, *Secretary*

MANY YEARS OF EFFORT are required to establish qualifications and provide training for any group of public health workers. In the field of sanitary inspection, remarkable progress has been made in a period of less than twenty years. It was in 1935 that the first syllabus and regulations governing the Association's examinations for the Certificate in Sanitary Inspection (Canada) were issued and five candidates presented themselves for the first examinations. Two years later the first edition of the Manual for Sanitary Inspectors was published. Initially, all employed sanitary inspectors were eligible to take the examinations, without reference to their educational status. In 1938, candidates who had not served as sanitary inspectors for at least one year were required to have three years of high-school work or its equivalent. A year later

this was increased to the present requirement—in most of the Provinces—of junior matriculation or its equivalent. In 1942 a correspondence course, providing instruction in the basic subjects of communicable diseases and vital statistics, environmental sanitation, food sanitation, and public health organization, was introduced.

The regulations in effect since 1952 require all candidates who have not been employed as sanitary inspectors for at least one year to obtain nine months of full-time field training under the supervision of a health department or unit, and to take the Association's correspondence course in sanitary inspection, which previously was not compulsory. Candidates who attend a formal course of instruction—such as that offered by the School of Hygiene, University of Montreal; the School for Sanitary Inspectors conducted by the Manitoba Department of Health and Public Welfare; and the Ontario Sanitary Inspectors' Training Course—are granted exemption from the correspondence course. The period of nine months of field work is decreased by the time spent at the formal course.

A noteworthy advance in training facilities during the past year was the introduction, in January 1953, of a formal course of instruction conducted under the auspices of the Department of Health of Ontario and known officially as the Ontario Sanitary Inspectors' Training Course. This course occupies a period of nine months and combines theory and practical work. It is financed under a Federal Health Grant and is directed by a Departmental Committee. The minimum basic educational requirement for registration is Ontario Secondary School Graduation (Grade XII). For candidates who attended school in Ontario, no equivalent standing can be accepted. The course is open to candidates from other Provinces, provided their education is satisfactory and their application is sponsored by their Deputy Minister of Health. The candidates are interviewed by a screening committee to determine their fitness for training and employment. Priority is given to those who are sponsored by a local health department. The course is organized to prepare candidates to write the Association's examinations for the Certificate in Sanitary Inspection (Canada) and is given in five major divisions: Public Health Organization, Administration and Legislation (120 hours); Preventive Medicine (126 hours); Food Sanitation (198 hours); Environmental Sanitation (including office practice) (358 hours); and Public Health Aspects of Civil Defence. Students may be awarded bursaries, amounting to \$175 a month for those with dependents and \$125 for others. The students provide their own text books.

The correspondence course is no longer open to candidates residing in the Province of Ontario, and instruction is available only through attendance at the formal course. Similarly, in the Province of Quebec, candidates must prepare themselves by attendance at the formal course in sanitary inspection given by the School of Hygiene, University of Montreal. Candidates living in other Provinces, in which formal courses are not available, are required to obtain a major part of their instruction through the correspondence course.

For the current session, which opened in January of this year, the correspondence course has been extensively revised. The changes which have been

made will make the course more effective and of greater value to the students, both in their preparation for the examinations and in their subsequent employment. The Committee is fortunate in having Mr. M. Flattery, Senior Sanitary Inspector of the Manitoba Department of Health and Public Welfare, undertake the revision of the course. It will be recalled that, in addition to his years of service with the Manitoba Department, Mr. Flattery had a major part in the direction of the School for Sanitary Inspectors which has been so successfully conducted by the Manitoba Department at intervals during the past several years. In the revised course, the subjects are not arbitrarily divided into separate classifications but are presented in related groups. Twenty candidates are enrolled for the 1954 session, and will write the examinations for the Certificate in the various provincial centres on September 15, 16 and 17.

On October 14, 15 and 16, 1953, the Committee held a special examination in Toronto for the eleven candidates completing the first Ontario Sanitary Inspectors' Training Course. All were successful and are now serving with various health units and health departments in the Province.

On April 10, 1954, an oral examination was held in Montreal for a group of six students who were completing the course in sanitary inspection given by the School of Hygiene, University of Montreal. Candidates who are successful in this course, which occupies a period of nine months, are granted exemption from the field inspection report and the written papers of the Association's examination and are awarded the Certificate in Sanitary Inspection (Canada) if they pass an oral examination conducted by the Committee's provincial examining board, which has as its chairman Mr. Théo. J. Lafrenière, Chief Engineer of the Provincial Ministry of Health.

With the granting of the Certificate to this group, the number of inspectors obtaining the Canadian qualification since the first examinations in 1935 now totals 889.

The Committee gratefully acknowledges the interest and co-operation of the Provincial Departments of Health and the Canadian Institute of Sanitary Inspectors in making possible the achievements of the past nineteen years.

Consideration is being given to amending the regulations to require that sanitary inspectors holding acceptable qualifications from other countries shall take the examinations for the Certificate in Sanitary Inspection (Canada) following a year's service in Canada under the supervision of a qualified inspector.

REPORT OF THE COMMITTEE ON RECRUITMENT OF PUBLIC HEALTH PERSONNEL

William Mosley, M.D., D.P.H., Chairman

ONE OF THE SERVICES provided by the Canadian Public Health Association to the Provincial Departments of Health, the Department of National Health and Welfare, and local health departments, is the recruitment of personnel. During the past year a presentation of the subject of public health as a career was again made in the medical colleges of Canada. Through the

co-operation of the professors of preventive medicine a revised edition of the booklet, "Public Health as a Career", was placed in the hands of the graduating and other classes in the Faculty of Medicine, so that they might have a reasonably complete picture of public health work and the opportunities for physicians. Of necessity the booklet is general in character, but it contains specific information about fellowships for post-graduate training and includes the names of the Deputy Ministers of Health of the various Provinces with whom interested physicians may communicate. It also gives the provisions for certification as a specialist in public health by the Royal College of Physicians and Surgeons of Canada and by the American Board of Preventive Medicine and Public Health, Incorporated.

As part of its recruitment service, the Association provides, through the Journal, an employment service for health agencies and public health personnel.

Other work of the Association has an important relation to recruitment. The work of the Committee on Professional Education, in establishing qualifications and standards for trained workers, is closely related to the recruitment program. The Committee on the Certification of Sanitary Inspectors is making a valuable contribution by providing a correspondence course and examinations for those desiring to enter this field. The recommendations of the Committee on Qualifications and Salaries of Public Health Personnel are also important to the success of the recruitment program.

REPORT OF THE COMMITTEE ON SOCIAL SECURITY

G. H. Hatcher, M.D., D.P.H., Secretary

THE COMMITTEE was enlarged this year under the chairmanship of Dr. C. W. MacMillan to include representatives of all the provinces, the Federal Departments, local health officers, and dental and nursing groups. The size of the Committee precluded their meeting except at the annual meeting of the Association, and even then their complete attendance could not be expected.

Views were therefore obtained by correspondence on the 1943 submission of the Canadian Public Health Association to the special committee on social security of the House of Commons and on the 1948 summary of the position of the Canadian Public Health Association with respect to preventive medicine and health insurance.

There was general agreement that the position of the Association should be reconsidered and new developments in the field of medical care administration taken into account. As indicated in last year's report, a number of medical care programs have been initiated or greatly extended since the 1943 submission.

Thus, five of our ten provinces have province-wide indigent medical care programs in operation, replacing much of the older municipal responsibility. Four of these are administered through an arrangement between the provincial department of welfare and the medical or other professional associations of the province, and one is under provincial health department administration

with an advisory assessment committee nominated by the provincial medical association. These programs are in addition to special provision for the indigent under the older municipal doctor programs and public health acts, and to the newer provision for hospitalization for the indigent under government hospitalization insurance programs.

Four of the ten Canadian provinces now have compulsory government hospitalization insurance programs. The experience of these programs in providing comprehensive benefits at very low administrative cost, in pooling the risk and thus preventing much medical indigence, and in relieving local municipalities and hospital boards of costs that can be met only by increased provincial contributions, is encouraging. New problems, however, have arisen in relation to excessive utilization and to difficulties in making adequate provision for the chronic sick. These programs have replaced or supplemented the traditional provincial health department responsibility of making per diem or other maintenance grants to acute general hospitals within the province.

Two of these hospital insurance programs are administered by the provincial health departments. One is locally administered with provincial financial assistance and legislative control and one is under a government commission responsible to the same minister as the health department.

The voluntary and commercial plans in Canada also exemplify the insurance approach to the problem of economic insecurity due to illness. Our five Blue Cross Plans are pre-eminent in the voluntary hospitalization insurance field in Canada, as are those in the United States, but commercial health insurance runs a close second. Insurance for physicians' services in Canada shows insurance companies to be the largest carriers, with more persons enrolled for surgical expenses than Blue Cross and physician-sponsored plans combined. The physician-sponsored plans, however, have developed a very comprehensive type of contract for physicians' services which in most provinces is without income limitations and in some plans is without extra-billing by either specialists or general practitioners.

Consumer-sponsored plans have extremely limited enrolment outside Ontario but have pioneered a number of interesting features such as deductible clauses and catastrophic coverage. Details of enrolment under voluntary and commercial insurance were summarized in the last year's report of this Committee and have since been published by the Joint Committee on Health Insurance of the Canadian insurance companies.

Much more study needs to be given to the voluntary and commercial plans before their possible role in a comprehensive health program for Canada can be determined. The turnover in enrolment and consequent high administrative cost even if the profit factor were eliminated, better methods of covering rural and older groups, the inequity of permitting some insurance carriers to insure the better risks and leave the worse risks for the more socially-minded plans or without coverage at all, all call for careful study.

The Canadian Sickness Survey has not thrown as much light as was anticipated on the difference between numbers of persons covered and extent of coverage of the actual costs of medical care under both government and voluntary and commercial programs. The social value of health insurance

depends on the degree to which it offers an equitable and economic method of spreading the costs from the sick to the well and thus permits the budgeting of medical care expenses. It is therefore disturbing to note that less than a quarter of the total medical care expenditures by Canadian families are covered by prepayment plans even though between half and two-thirds of the population has some health insurance protection.

Both the traditional indigent medical care approach and the health insurance approach leave us with the problem of the low-income groups who must be covered at public expense subject to a means test. The fluctuating nature of this group according to economic conditions and according to their sickness experience presents an administrative problem which is not fully met by either of these methods.

In this regard it is of interest that perhaps the only new medical care development in Canada since our report last year has been the change in the British Columbia Hospital Insurance Service which will transform that program from a health insurance to a health service basis. Thus, eligibility for care will be dependent on provincial residence and not on prior payment of a premium. This principle is also inherent in practice in the Swift Current program, although not in theory. It is similar in this respect to the change which occurred in 1948 in Great Britain when the health insurance method begun in 1912 was superseded by a health service approach.

There has been little evidence during the past year of any unanimity among the provinces in their methods of using the three new Federal Health Grants. The relation of two at least of these grants to overall health care is obvious and this also will be of concern to this Committee.

Among the items for consideration in the coming year will be some of the following: (i) The compulsory requirement of contributory health insurance. (ii) Re-examination of the suggested distinction between health insurance and sickness insurance in our 1943 submission. The factors encouraging necessary preventive measures and high quality of care in medical care plans need to be re-evaluated according to the experience of present-day plans. (iii) Bedside nursing care as a health department activity. (iv) The establishment of demonstration areas in Canada to determine new standards for public health services.

REPORT OF THE LABORATORY SECTION

F. O. Wishart, M.A., M.D., D.P.H.
Secretary

THE TWENTY-FIRST annual meeting of the Laboratory Section was held in Toronto on December 14 and 15, 1953. A special effort was made to mark this coming-of-age of the Section and three novel features were introduced. Firstly, two full days were devoted to scientific sessions, instead of the usual day and a half. This may in some measure be interpreted as a sign of growth and maturity. Secondly, the annual dinner was replaced by a luncheon meeting

which was addressed by Dr. G. B. Reed, who was chairman of the inaugural meeting in 1932. Dr. Reed dealt interestingly with the development, contribution and purpose of the Section over the years. Lastly, the second day's program was conducted at the Hospital for Sick Children instead of the Royal York Hotel. The excellent lecture room and cafeteria facilities, in addition to a visit to the hospital laboratories, made the change a pleasant innovation. These privileges, extended by the hospital authorities and arranged by our chairman, Dr. T. E. Roy, were much appreciated.

A large attendance and registration for the meeting was gratifying, as was the excellence of the papers presented. One session was concerned solely with fungal infections of man, perhaps the first such symposium to be held in Canada. Two experts in this field, Dr. F. Blank, Department of Bacteriology and Immunology, McGill University, and Mr. J. B. Fischer, Division of Laboratories, Department of Health of Ontario, contributed to the discussion of the papers.

At the business session the time and place of the next annual meeting were discussed and referred back to the Executive, Council and Program Committee, which selected Montreal, with dates to be arranged later. Length of the meeting, whether 1½ or 2 days, was likewise discussed, and on motion of Dr. E. G. D. Murray and Dr. E. T. Bynoe it was recommended that no fixed pattern be adopted. A suggestion by Dr. C. E. Dolman that 15 minutes should be the presentation time for papers, with 5 minutes for discussion, was approved. A motion by Dr. Dolman and Dr. Chas. A. Mitchell that a preliminary program be prepared and sent to all members and potential members was endorsed unanimously.

The retirement of Mr. M. H. McCrady as chairman of the Committee on Bacteriological Examination of Water and Sewage, and as Director of the Division of Laboratories in the Quebec Ministry of Health, was announced and his suggestion that Dr. Archambault assume chairmanship of the committee was presented. On motion of Drs. Bynoe and Dolman, the Secretary was instructed to ask Dr. Archambault to head the water and sewage committee and to convey to Mr. McCrady the sincere thanks and good wishes of the Section.

Finally, a nominations committee consisting of Drs. Mitchell, Dolman and Bynoe was appointed. At the following session, the slate of officers proposed by this committee was announced: Chairman, Dr. R. D. Stuart, Edmonton; Vice-chairman, Dr. R. Gwatkin, Hull; Secretary, Dr. F. O. Wishart, Toronto; Council: Dr. A. E. Allin, Dr. E. T. Bynoe, Dr. A. Frappier, Dr. P. H. Greey, Dr. R. W. Reid and Dr. J. W. Stevenson. Unanimous approval was given by the members.

The meeting was brought to a close with a special vote of thanks to Dr. T. E. Roy for his services as chairman for two successive years.

Abstracts of the twenty-eight papers given at the meeting were published in the January issue of the JOURNAL.

REPORT OF THE VITAL AND HEALTH STATISTICS SECTION

H. G. Page, M.A., M.P.H., Secretary

IN ACCORDANCE with the consensus of the Section Council that annual meetings of the Section be held, as far as possible, in conjunction with the convention of the Association, the 1953 meeting was held in the Royal York Hotel, Toronto, on October 1 and 2, as part of the Association's forty-first annual meeting.

No formal meeting of the Section Council was held during the annual meeting, as a quorum of Council members was unable to attend the Association's meeting.

On Thursday, October 1, a joint meeting was held with the Epidemiology Section. The chairman of the Vital and Health Statistics Section, Mr. T. E. Ashton, reviewed the 23-year history of the Section, outlining in particular the Section's affiliations and relationships over the years with other sections of the Association. He pointed out that the Section was originally affiliated with the Epidemiology Section. He stressed the contribution which the Section could make to the field of epidemiological studies, as illustrated by several of the papers to be presented.

Four papers were presented at this session:

Measles in the Canadian Arctic—Dr. A. F. W. Peart, Chief, Epidemiology Division, Department of National Health and Welfare, Ottawa: Review of the spread of a measles outbreak among Eskimos. Discussion revolved around the subject of concurrent infections such as influenza, encephalitis, mumps, scarlet fever, etc., and the efficiency of antibiotics—penicillin, aureomycin—in the control of the outbreak.

Observations on Mortality from Lung Cancer in Canada—Dr. J. Wyllie, Professor of Preventive Medicine, Queen's University, Kingston: Reference was made to previous papers and studies on this subject; some of the factors affecting an increase in lung cancer mortality and some of the points to be kept in mind in analysing data from medical certificates of cause of death were enumerated; an explanation of the Comparative Mortality Index as applied to lung cancer mortality was described and the resultant trends explained.

Public Health Statistics in Air Pollution Studies—Gordon H. Josie, Research Division, Department of National Health, Ottawa: An outline of the methodology used in planning and setting up studies of air pollution in an area, with particular reference to the Windsor-Detroit study; methods of selecting sample and control areas, the type of data required to be collected, and factors relating to air pollution.

Incidence of Mental Disorders—J. M. Wanklin, Dr. C. W. Buck and Dr. G. E. Hobbs, Faculty of Medicine, University of Western Ontario, London: An analysis of trends in first admission rates to mental hospitals in Ontario during 1927 to 1946, by age, sex, and diagnosis.

At the second session, on Friday, October 2, three papers were presented:

The Tuberculin Test in a BCG Vaccination Program—Dr. C. B. Stewart, Professor of Epidemiology, Dalhousie University, Halifax: Analysis of tuberculin tests and post-vaccination reactions among medical and nursing students. Discussion centred around the use and effectiveness of PPD₂ as compared with old tuberculin.

Some Figures on Poliomyelitis in Canada—R. Kohn, Dominion Bureau of Statistics, Ottawa: A review of reported cases and case rates, by provinces, during the period 1924 to 1952.

Hospitalization Experience of a Government Hospital Care Insurance Plan—G. W. Myers, Saskatchewan Hospital Services Plan, Regina: Review of the volume of hospital care provided by the Saskatchewan Hospital Care Plan; analysis of morbidity incidence by age, sex, and diagnosis, utilization of bed capacities, and extent of surgical operations.

At the business session, the minutes of the 1952 annual meeting in Winnipeg were approved as printed. The following resolutions, presented by a committee under the chairmanship of Dr. J. Wyllie, were adopted.

Resolution No. 1

WHEREAS data on the causes of foetal death (stillbirth) in Canada are necessary for intensive studies by statisticians and clinicians and also for teaching purposes in the departments of preventive medicine and of obstetrics in Canadian medical schools;

AND WHEREAS the medical certificates of stillbirth (foetal death) signed by physicians contain much useful information;

BE IT RESOLVED that the Vital and Health Statistics Section of the Canadian Public Health Association recommend to the Dominion Bureau of Statistics that, at the earliest opportunity, national and provincial statistics on the causes of foetal death by age of foetus be tabulated and published annually for a trial period of three years.

Resolution No. 2

WHEREAS the reports and analytical studies of the Dominion Bureau of Statistics are essential to effective public health activities in Canada;

AND WHEREAS the personnel of the Health and Welfare Division of the Dominion Bureau of Statistics are active participants in this Section;

BE IT RESOLVED that the Canadian Public Health Association express to the Dominion Statistician its appreciation of the significant contributions made to public health in Canada by the Dominion Bureau of Statistics.

Resolution No. 3

WHEREAS the papers presented this year before the Vital and Health Statistics and Epidemiology Sections have a broad interest for public health workers in many fields of endeavour;

BE IT RESOLVED that the Editorial Committee of the Canadian Journal of Public Health be requested to arrange for the prompt publication of the papers.

Resolution No. 4

WHEREAS data on the mortality of diseases such as cancer and heart disease in counties and selected areas are requisite for the study of the regional distribution of disease;

BE IT RESOLVED that the Dominion Bureau of Statistics be respectfully requested to take steps to furnish appropriate material for this purpose.

Resolution No. 5

WHEREAS the Vital and Health Statistics Section recognises that difficulties are still widely encountered in completing and interpreting the medical certificate of the cause of death;

BE IT RESOLVED that this Section urge the Canadian Public Health Association to stimulate a better understanding of the problems involved in order to secure uniformity of practice in the completion, collection and analysis of death certificates.

The report of the Nominations Committee was presented by the chairman, Dr. A. H. Sellers. The following officers were elected for 1953-54: Chairman, Dr. Paul Parrot; 1st Vice-chairman, Mr. G. W. Myers; 2nd Vice-chairman, Dr. Jean F. Webb; Secretary, Mr. H. G. Page. The following were appointed

to the Section Council (the year of their retirement is shown in parentheses): Mr. J. T. Marshall, Ottawa (1954); Dr. J. Wyllie, Kingston (1955); Dr. A. H. Sellers, Toronto (1956); Mr. J. Doughty, Victoria (1957); Dr. C. B. Stewart, Halifax (1958); Mr. T. E. Ashton, Toronto (1954).

The attendance at the joint session with the Epidemiology Section was 75; at the second session, 46.

REPORT OF THE COMMITTEE ON NOMINATIONS

C. W. MACMILLAN, M.D., D.P.H., Chairman

OFFICERS OF THE CANADIAN PUBLIC HEALTH ASSOCIATION FOR 1954-1955

Honorary President: THE HON. W. W. CROSS, M.D., Minister of Health, Province of Alberta.

President: DR. A. SOMERVILLE, Deputy Minister of Health for the Province of Alberta, Edmonton.

President-Elect: DR. J. A. MELANSON, Chief Medical Officer for the Province of New Brunswick, Fredericton.

Vice-Presidents:

DR. L. A. PEQUEGNAT, Medical Officer of Health, City of Toronto.

DR. LEONARD MILLER, Deputy Minister of Health for the Province of Newfoundland, St. John's.

MISS BRIGITTE LALIBERTE, Chief Nurse, Department of Health, City of Montreal.

Honorary Secretary: DR. WILLIAM MOSLEY, Director, East York—Leaside Health Unit, Toronto.

Honorary Treasurer: DR. G. W. O. MOSS, Public Health Associate, Connaught Medical Research Laboratories, University of Toronto.

Editor, Canadian Journal of Public Health: DR. R. D. DEFRIES, Director, School of Hygiene and Connaught Medical Research Laboratories, University of Toronto.

Executive Committee:

DR. G. F. AMYOT, Victoria

DR. J. H. BAILLIE, Toronto

DR. A. E. BERRY, Toronto

DR. G. D. W. CAMERON, Ottawa

MISS HELEN CARPENTER, Toronto

DR. A. M. CLARKE, Fredericton

DR. O. H. CURTIS, Charlottetown

DR. R. D. DEFRIES, Toronto

DR. M. R. ELLIOTT, Winnipeg

DR. JULES GILBERT, Montreal

DR. JEAN GREGOIRE, Quebec

DR. AD. GROULX, Montreal

DR. J. S. KITCHING, Hamilton

MR. THEO. J. LAFRENIERE, Montreal

DR. G. M. LITTLE, Edmonton

MISS HELEN G. MCARTHUR, Toronto

MISS RUTH MCCLURE, Edmonton

DR. C. W. MACMILLAN, Montreal

DR. LEONARD MILLER, St. John's

DR. STEWART MURRAY, Vancouver

DR. J. T. PHAIR, Toronto

DR. J. S. ROBERTSON, Halifax

DR. F. B. ROTH, Regina

DR. G. R. WALTON, Regina

DR. HENRY WILKINSON, Bermuda

REPORT OF THE COMMITTEE ON RESOLUTIONS

L. A. PEQUEGNAT, M.D., D.P.H., Chairman

WHEREAS at the Fortieth Annual Meeting of the Canadian Public Health Association in Winnipeg in 1952, the Association went on record as recommending the fluoridation of community water supplies for the reduction in dental caries in those communities where there is at present an insufficient fluoride content for this purpose and where the procedure can be adequately controlled and supervised,

AND WHEREAS the Association at this time sees no reason to change its former opinion in this matter and notes accumulating evidence in favour of fluoridation,

AND WHEREAS it feels that valuable time is being lost because of the failure of most Canadian communities to implement this procedure,

BE IT RESOLVED that the Canadian Public Health Association reaffirms its former resolution, with the recommendation that the fluoridation of public water supplies be proceeded with forthwith, subject to the conditions, circumstances and controls as set forth in said former resolution.

BE IT RESOLVED that this Association notes with approval the increasing interest in medical care and registers gratification on the occasion of the First Canadian Medical Care Conference, which has been held conjointly with the Forty-Second Annual Meeting, and suggests to its membership that it must always bear in mind that medical care is an inescapable interest of those engaged in public health.

BE IT RESOLVED:

That the Association gratefully acknowledges the generous action of the Ministry of Health of the Province of Quebec in making a contribution towards the expenses of the Forty-Second Annual Meeting.

That the Association expresses its appreciation to the members of the Local Committee on Arrangements, under the direction of Dr. Jean Grégoire, for the admirable planning and arrangement of the Forty-Second Annual Meeting.

That the thanks of the Association be extended to all who have contributed to the success of the meeting, in particular to the Hon. J. H. A. Paquette, M.D., whose hospitality has been most generous.

That the Association convey to the Management of the Château Frontenac its appreciation of the excellent accommodation and service.

That the Association express to the Press of the City of Quebec and elsewhere, and to other publicity media, its thanks for the coverage accorded the deliberations of the conference.

**ONTARIO PUBLIC HEALTH ASSOCIATION
FIFTH ANNUAL MEETING
ROYAL YORK HOTEL, TORONTO
SEPTEMBER 23 AND 24, 1954**

**Directory of Sessions
Thursday, September 23**

- 9.00 a.m.**—Registration. Convention Floor Foyer.
9.30 a.m.—Minister's Conference for Ontario Health Officers. Concert Hall.
11.20 a.m.—General Session. Concert Hall.
12.30 p.m.—Luncheon. Concert Hall.
2.00 p.m.—Section Meetings:
 Public Health Nursing. Parlour A.
 Dental Public Health. Parlour B.
 Environmental Hygiene. Parlour C.
 Health Officers. Parlour D.
 Veterinary Public Health. Private Dining Room No. 10.
7.30 p.m.—Directors and Officers of the Association. President's Suite.

Friday, September 24

- 9.00 a.m.**—General Session. Ballroom.
12.30 p.m.—Luncheon. Roof Garden.
2.00 p.m.—Section Meetings:
 Public Health Nursing. Library.
 Dental Public Health and Health Officers. Roof Garden.
 Veterinary Public Health and Environmental Hygiene. Parlour C.

REGISTRATION

All delegates are expected to register. The fee is \$1.00. Delegates who are not now members will be required, at the time of registering, to take out membership for 1955 in the Ontario Public Health Association and the Canadian Public Health Association. The conjoint membership fee is \$4.00.

It will be helpful if delegates, particularly health officers, will be prompt in registering, in order that the Minister's Conference may begin on time.

HOTEL ACCOMMODATION

Delegates booking rooms in the Royal York Hotel through the Association assist in defraying the cost of the Convention at no cost to themselves. Please use the coupon on page 4 of this issue.

MEETINGS

All meetings will begin promptly at the times scheduled.

The annual business meeting of the members of the Association will be held in the Ballroom on Friday, September 24, at 11.15 a.m., following the General Session. Resolutions to be presented at this meeting must first be considered by the Board of Directors, which will meet on Thursday, September 23, at 7.30 p.m. Provision has been made for Sections to conduct their business meetings on Thursday afternoon. Resolutions to be referred to the Board of Directors must be received by the Resolutions and Nominations Committee not later than 6.00 p.m. on Thursday, September 23.

Program

Thursday, September 23, 9.00 a.m.

REGISTRATION

Thursday, 9.30 a.m.

MINISTER'S CONFERENCE FOR ONTARIO HEALTH OFFICERS

Concert Hall

Presiding:

MISS EDNA L. MOORE, Director of Public Health Nursing, Department of Health for Ontario, and President of the Association.

THE HONOURABLE MACKINNON PHILLIPS, M.D., Minister of Health,
and Senior Officers of the Department of Health for Ontario.

Thursday, 11.20 a.m.

GENERAL SESSION

Concert Hall

Fluoridation of Water Supplies.

DR. H. K. BROWN, Director of Dental Public Health, Department of National Health and Welfare, Ottawa.

Thursday, 12.30 p.m.

LUNCHEON

Concert Hall

Presiding:

MISS EDNA L. MOORE, President of the Association.

Speaker: THE REV. W. A. YOUNG, Chaplain, Ontario Agricultural College, Guelph, and Lecturer, Department of Public Relations.

"Public Relations and Public Health"

Thursday, 2.00 p.m.

PUBLIC HEALTH NURSING SECTION

Parlour A

Presiding: MISS HELEN FASKEN, Director of Public Health Nursing, Wellington County Health Unit, Fergus, and Chairman of the Section.

Business Session.

Rehabilitation.

MISS ESTHER ROBERTSON, Education Director, Victorian Order of Nurses for Canada, Ottawa.

Thursday, 2.00 p.m.

DENTAL PUBLIC HEALTH SECTION

Parlour B

Presiding: DR. J. W. LAWRENCE, Peel County Health Unit, Brampton, Chairman of the Section.

Evaluation of 'Anti-Enzyme' Compounds.

DR. G. NIKIFORUK, Director of Dental Research, University of Toronto.

Natural Immunity.

DR. R. M. GRAINGER, Dental Statistician, Department of Health for Ontario.

Business Meeting.

Thursday, 2.00 p.m.

ENVIRONMENTAL HYGIENE SECTION

Parlour C

Presiding: MR. JOHN HOMER, Department of Health, Hamilton, First Vice-President of the Association.

Communicable Disease Regulations.

MR. T. H. JACKSON, Chief Quarantine Officer, Department of Public Health, City of Toronto.

Sanitary Land Fill—Film.

MR. H. W. PYKALA, Crothers Ltd., Toronto.

Business Session.

Thursday, 2.00 p.m.

HEALTH OFFICERS' SECTION

Parlour D

Presiding: DR. L. W. C. STURGEON, Director, Welland and District Health Unit, Welland, Chairman of the Section.

The Role of the Part-time Health Officer.

DR. W. J. DEADMAN, Pathologist, Hamilton General Hospital.

Current Problems in Sanitation.

DR. A. E. BERRY, Director, Division of Sanitary Engineering, Department of Health for Ontario.

Certain Points in Diagnosis and Treatment of Tuberculosis.

DR. C. G. SHAVER, Medical Superintendent, Niagara Peninsula Sanatorium, St. Catharines.

Business Session.

Thursday, 2.00 p.m.

VETERINARY PUBLIC HEALTH SECTION

Private Dining Room No. 10

Presiding: DR. D. A. DAMUDE, Halton County Health Unit, Milton, Chairman of the Section.

Public Health Standards for Milk—Interpretation and Significance.

DR. C. K. JOHNS, Division of Bacteriology and Dairy Research, Science Service, Department of Agriculture, Ottawa.

Theory and Mechanics of the Milking Machine and its Application in the Field of Veterinary Public Health.

DR. G. H. HOBSON, DeLaval Separator Company, Poughkeepsie, N.Y.

Business Session.

Thursday, 7.30 p.m.

DIRECTORS AND OFFICERS OF THE ONTARIO PUBLIC HEALTH ASSOCIATION

President's Suite

Friday, September 24, 9.00 a.m.

GENERAL SESSION

Ballroom

Presiding: MISS EDNA L. MOORE, President of the Association.

Bulk Haulage of Milk—with film.

DR. S. N. WARD, Division of Food Control, Department of Public Health, City of Toronto.

President's Address.

MISS EDNA L. MOORE, Director of Public Health Nursing, Department of Health for Ontario.

Annual Business Meeting.

Reports of Resolutions and Nominations Committees.

Friday, 12.30 p.m.**LUNCHEON**

Roof Garden

Presiding: MR. JOHN HOMER, Department of Health, Hamilton, First Vice-President of the Association.

Speaker: DR. W. G. McINTOSH, Assistant Professor of Periodontology, Faculty of Dentistry, University of Toronto.

Periodontal Disease in Relation to Children (with lantern slides).

Friday, 2.00 p.m.**PUBLIC HEALTH NURSING SECTION**

Library

Presiding: MISS VERA SMYTHE, Supervisor, Public Health Nursing, York County Health Unit, Newmarket, Ontario.

Community Action for Family Health.

Presented by representatives from the Community Workers of Guelph and Wellington County.

Narrator—MR. KENNETH MARSHALL, Recreation Director, City of Guelph, President of Community Workers.

Teacher—MR. CARL HINCKS, Remedial Teacher, South Inspectorate, Wellington County.

Social Worker—MRS. ELSIE PURCELL, Superintendent, Children's Aid Society of Guelph and Wellington County.

Nursing—

MISS MARGARET TURNER, Supervisor of Public Health Nursing, Department of Health, Guelph.

MISS RUTH GAW, Director of Nurses, Guelph General Hospital.

MISS CONSTANCE SWINTON, Senior Nurse, Victorian Order of Nurses, Guelph Branch.

MISS HAZEL PETERSON, Industrial Nurse, Federal Wire and Cable Co. Ltd., Guelph.

MISS ANNE SAYER, Area Public Health Nurse, Ontario Society for Crippled Children.

MISS HELEN FASKEN, Director of Public Health Nursing, Wellington County Health Unit, Fergus.

Friday, 2.00 p.m.**PUBLIC HEALTH DENTISTRY SECTION AND
HEALTH OFFICERS' SECTION**

(Combined Meeting)

Roof Garden

Presiding: DR. J. W. LAWRENCE, Peel County Health Unit, Brampton, Chairman of the Dental Public Health Section.

Panel: Child Health.

Convenor: DR. L. W. C. STURGEON, Director, Welland and District Health Unit, Chairman of the Health Officers' Section.

Participants:

Dental—DR. M. A. BOYES, Toronto.

DR. W. K. SHULTIS, Toronto.

DR. W. J. DUNN, Toronto.

Medical—DR. CARL HILL, Willowdale, North York.

DR. J. B. COOK, Sudbury.

DR. D. G. H. MACDONALD, Brampton.

Nutrition of the School Child.

DR. E. W. McHENRY, Professor of Public Health Nutrition, School of Hygiene, University of Toronto.

Friday, 2.00 p.m.

**ENVIRONMENTAL HYGIENE SECTION AND
VETERINARY PUBLIC HEALTH SECTION**

(Combined Meeting)

Parlour C

Presiding: MR. T. H. JACKSON, Chief Quarantine Officer, Department of Public Health, City of Toronto, Chairman of the Environmental Hygiene Section; and DR. D. A. DAMUDE, Halton County Health Unit, Milton, Chairman of the Veterinary Public Health Section.

Pest Control.

PROFESSOR R. H. OZBURN, Department of Entomology and Zoology, Ontario Agricultural College, Guelph.

Cleaning Compounds and Sanitizing Agents of Public Health Interest.

Panel—DR. C. K. JOHNS, Ottawa.

MR. D. WOODS, Toronto.

DR. D. B. BARNUM, Guelph.

MR. R. FORD, Toronto.

ONTARIO PUBLIC HEALTH ASSOCIATION, 1954

President: MISS EDNA L. MOORE, Toronto.

1st Vice-President: MR. JOHN HOMER, Hamilton.

2nd Vice-President: DR. D. V. CURREY, St. Catharines.

Member-at-Large: DR. C. A. HARRIS, London.

Secretary-Treasurer: DR. A. R. J. BOYD, Toronto.

Representing Public Health Nursing Section: MISS HELEN FASKEN, Fergus.

Representing Environmental Hygiene Section: MR. F. L. LUNN, Brampton.

Representing Veterinary Public Health Section: DR. D. DAMUDE, Milton.

Representing Dental Public Health Section: DR. J. W. LAWRENCE, Brampton.

Section Officers

Dental Public Health:

Chairman: DR. J. W. LAWRENCE, Brampton.

Vice-Chairman: DR. S. L. HONEY, Welland.

Secretary: DR. M. A. JARRET, Fergus.

Veterinary Public Health:

Chairman: DR. D. A. DAMUDE, Milton.

Vice-Chairman: DR. R. DORLAND, Belleville.

Secretary: DR. F. HARDEN, Peterborough.

Health Officers:

Chairman: DR. L. W. C. STURGEON, Welland.

Secretary: DR. J. M. McGARRY, St. Catharines.

Environmental Hygiene:

Chairman: MR. T. H. JACKSON, Toronto.

Secretary: MR. ROBERT CRAIG, Newmarket.

Public Health Nursing:

Chairman: MISS HELEN FASKEN, Fergus.

Vice-Chairman: MISS VERA SMYTHE, Newmarket.

Secretary: MISS CONSTANCE GRAY, Toronto.

EMPLOYMENT SERVICE

Public Health Nurses required in a generalized program in rural and semi-urban area adjacent to metropolitan Toronto. Excellent working conditions including pension plan, group insurance and transportation arrangements. Write to Dr. R. M. King, York County Health Unit, Newmarket, Ontario. 5-8

Public Health Nurses, bilingual, required by Prescott & Russell Health Unit. Minimum salary \$2600 with allowance for previous experience and annual increments. Car provided or allowance for own car. Blue Cross and sick leave. Apply to Dr. R. G. Grenon, Director, Prescott & Russell Health Unit, Hawkesbury, Ontario. 5-8

Public Health Nurses required by Department of Health, City of Kingston. Salary range in effect; transportation provided; five-day week; pension and hospitalization plans available. Apply to Medical Officer of Health, City Hall, Kingston, Ontario. 5-8

The Province of Manitoba requires **Medical Directors** for Local Health Units in Manitoba. Applicants must be eligible for registration in Manitoba. Preference will be given to experienced physicians with post-graduate training in Public Health of at least one year at an approved university—but applications will be accepted from qualified physicians with lesser qualifications. Salary range: \$5,640-\$7,620 per annum, depending on qualifications and experience. Full Civil Service benefits—liberal sick leave, three weeks' vacation annually with pay, and pension privileges. Apply to: **Manitoba Civil Service Commission**, 247 Legislative Building, Winnipeg, Manitoba.

Public Health Nurse: The Town of Deep River has an opening for a Public Health Nurse. Salary \$2,900 to \$3,120, depending on qualifications. Pension, medical and vacation plans. Living accommodation in Staff Hotel. State all details, including age, marital status, education and experience, in first letter to "File 7D", Atomic Energy of Canada Limited, Chalk River, Ontario. 7-9

Wanted by the City of Toronto, Department of Public Health: Qualified Public Health Nurses for generalized public health nursing service. Salary range \$3,078-\$3,946. Starting salary based on experience. Annual increments, 5-day week, vacation, sick pay and pension plan benefits. Apply: Personnel Department, Room 320, City Hall, Toronto. 7-9

Medical Officer of Health wanted by York County Health Unit as assistant to Director and M.O.H. Excellent opportunity for association in the development of an expanding program in a young urban-rural health unit adjacent to Metropolitan Toronto. Write to Dr. R. M. King, Director, or to W. B. Epworth, Secretary, York County Health Unit, Newmarket, Ontario. 7-9

Sanitary Inspector, qualified, C.S.I.(C.), experienced in full general program, desires position with either health unit or private concern. References available. Although non-car owner, could purchase on Health Unit loan plan. Box 24, Canadian Public Health Association, 150 College Street, Toronto 5, Ontario. 7-9

